READ PERSPECTIVES

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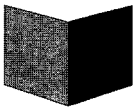

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INTRODUCTION

This year—1998—marks the thirtieth anniversary of the Bilingual Education Act, Title VII of the Elementary and Secondary Education Act of 1968, and the occasion is being celebrated with real fireworks.

On the national level, Congress has taken up new legislation that may change federal policy and regulations dramatically if it is enacted this fall. HR 3892, introduced by Representative Frank Riggs (R–California) and approved by the Education and Workforce Committee of the U.S. House of Representatives, combines the funding for bilingual education and immigrant education into one block grant (Lynn Schnaiberg, "House Bill Would Alter Federal Bilingual Ed. Policy," *Education Week,* June 17, 1998, p. 6). These funds will be allocated directly to the states, based on the number of limited-English students in each school district.

For the first time in thirty years, the federal government will no longer dictate the kind of program that will receive federal funding but will give districts maximum flexibility. HR 3892 also specifies that parents of limited-English proficient (LEP) students must grant permission before their children are placed in a special program. This new law has the elegance of simplicity—it is direct, and it promotes diversity of educational options. All school districts with LEP students would receive funds, rather than a few favored districts receiving the lion's share as in the past. No longer would three-fourths of the federal funds be earmarked only for native-language instruction programs—all districts may choose among a number of program models, according to their own local conditions.

At the state level, although minor changes have occurred in Rhode Island, New Jersey and Massachusetts in recent years, it is California that has produced the shocker this year. The "English for the Children" Initiative, filed and vigorously promoted by California businessman, Ron Unz, received 61 percent of the popular vote on June 2, 1998, in spite of a strong opposition campaign that outspent the Unz supporters by three to one. Unz enlisted Latino leaders such as Jaime Escalente, the famous high school teacher whose success in teaching Latino students advanced mathematics was the subject of the film, *Stand and Deliver.* The English-teaching campaign made good use of the Spanish-language media. On June 3 a coalition of advocates for the *status quo* challenged the law in federal court, asking for a restraining order to stop its application. On July 15 the court ruled that the plaintiffs had not made a case

for putting a hold on the implementation of the new law. In a forty-eight page opinion, Judge Legge concluded that English-teaching programs in no way deny any child's civil rights; are not prejudicial to national origin minority groups; and that the plaintiff's case was based largely on the speculative nature of future harm.

Contrary to the alarmist statements of native language program supporters, the new law does not do away entirely with bilingual instruction. Instead, it redirects the education for limited-English students, focusing intensively on the early and rapid learning of English rather than on the long years of mainly Spanish language instruction favored and promoted strongly by the California Department of Education for the past twenty-two years. The law now requires that all LEP children be placed in a special English immersion program "for a period not normally to exceed one year..." or until English learners have acquired "a good working knowledge of English" (English Language Education for Immigrant Children Initiative, Article 2, pp. 1–2). Judicial support for this California initiative can be expected to influence other states. Parents are allowed to request an alternative to the English language program for their children.

Four new authors grace the pages of *READ Perspectives'* Fall 1998 issue, as well as a third appearance by Bethlehem, PA, educator Ann Goldberg. Professor Christine M. Rossell, national authority on bilingual education research, reviews the ninety-six page Wayne Thomas-Virginia Collier report that became available via Internet (http://www.ncbe.gwu.edu/ncbepubs) in May of this year. This is one of the first critiques of the study that has dominated the public dialogue on language minority education for the past two years. In my twenty-five year experience in this field, no report of "findings" on bilingual education programs has ever received more laudatory press attention on the basis of less documentation. No one was allowed to see the data on which this study's conclusions were supposedly based, yet the conclusions were routinely reported as fact.

Rossell points out these serious problems with the Thomas-Collier material currently available: there is still no "there," i.e., no information is provided on which students, which school districts, what characteristics of classroom instruction, socioeconomic levels, or test scores, have been examined; the methodology employed is unscientific and can produce misleading results; and the authors simply rejected some of the results at will. Two prominent features of the report are prolonged discussions of bilingual education theory and attacks on the scientific method. So the complaint remains, "Where's the beef?"

Mark Hugo Lopez of the University of Maryland School of Public Affairs and Marie T. Mora of the Department of Economics and International Business at New Mexico State University contribute a rare, preliminary study analyzing the possible effects of different types of schooling on the future earnings capacity of Latino students. In their report, "Bilingual Education and Labor Market Earnings Among Hispanics: Evidence Using *High School and Beyond*," the authors find that "first and (to a lesser extent) second generation Hispanics who attended a bilingual education program earn significantly less than their otherwise similar English-immersed peers who received monolingual English instruction, *ceteris paribus*." The earnings differences for these two groups of Hispanics are significantly different. Ten years after high school graduation, first generation (foreign born) Hispanics educated in English earn 31 percent more annually than their peers who had been in bilingual programs. For native-born, second generation children of Hispanic families, the earnings difference is smaller but still important: bilingually-educated students earn 24 percent less than English-immersed students. Certainly there is an urgent need for continued research in this area.

In March of this year, one segment of the *Children of Immigrants Longitudinal Study*, begun in 1992, was released to the national press by Professor Ruben G. Rumbaut at Michigan State University. The READ Institute commissioned a review of this important work by Professor Paul Hollander, University of Massachusetts sociologist and published author on American social and cultural issues. The portion of the study under review tracks children of immigrants in San Diego County and Miami-Dade County from 1992 to 1995–96 when most were high school seniors. As one would expect, the differences in attitudes, behaviors, school achievement, and social adjustment vary greatly among first and second generation Latino and Asian immigrants who now constitute 71.5 percent of the Miami-Dade County population and 43 percent of San Diego County residents (Celia W. Dugger, "Study of Immigrants' Young Discounts Fears for Future," *New York Times*, 3/21/98, p. 1).

As is our practice, *READ Perspectives* publishes follow-up reports on promising school programs for English language learners from time to time. The current article by Ann Goldberg, Coordinator of the English Acquisition Program for the Bethelehem, PA, Area Public Schools, reports on the evolving program features and on the student progress in English language learning at the end of the fourth year. Bethlehem took the courageous step of completely remodeling its education program for LEP students, almost all Spanish-speaking Puerto Rican children, in 1993. The Spanish bilingual program which the district had provided for a dozen years had not produced satisfactory results in student achievement.

Bethlehem reports that at the end of the third year, 63 percent of the children in the English Acquisition Program had already exited the program or were at the "advanced" level of English and "able to participate fully in regular classroom instruction without special help." At the end of the fourth year, according to Bethlehem data, "83 percent of the students who started in the program are able to participate fully in regular classroom instruction in English, with minimal or no special help." To appreciate the uncommonly high level of progress represented here, it is necessary to compare the Bethlehem data with California where the state-wide average in 1997 for LEP students exiting from bilingual programs was 6.7 percent (Debra Camillo, California Department of Education).

Bethlehem began a noteworthy school-to-work program last year for students at the high school level who enter the city schools with multiple problems besides the lack of English language—low reading and writing skills, poor motivation, unsuitable behavior, a record of truancy. A local hospital provides these at-risk students with mentors who work with them two afternoons a week, and they are enrolled in a special high school curriculum related to careers in the health care field. Of the sixteen students who started in the first year of the program, eleven graduated successfully, three moved to other cities, and only two did not complete it—quite an impressive beginning. The school-to-work program will continue with a slightly larger number of students in the Fall of 1998.

Ms. Goldberg speaks for many of us when she says of the bilingual students, "These children are our future doctors, teachers, business managers, and artists. Their diverse backgrounds will lend strength to our society as they participate in the full range of opportunities in the English-speaking community."

Rosalie Pedalino Porter, Editor
READ Perspectives

Mystery on the Bilingual Express: A Critique of the Thomas and Collier Study "School Effectiveness for Language Minority Students"

Christine H. Rossell

Perhaps no other "yet to be released" report has been quoted so much or so often as the so-called "Collier Study."[1] Approximately two years before the report was completed, Virginia Collier was holding public meetings at which she disseminated a five page summary of her "study" (Thomas and Collier, 1995)—two pages of text, two pages of line graphs, and a one page list of program definitions. In no time, the "Collier Study" had become another factoid in the controversy over bilingual education. Even though no one had actually read it, the report was being cited everywhere as proof that bilingual education, particularly two-way bilingual education, was superior to all other programs for limited-English proficient (LEP) children.

Some two years later, the complete report has finally been issued. It can be downloaded from the National Clearinghouse for Bilingual Education web page at http://www.ncbe.edu. Although 96 pages long, it contains no more data on the findings of the study than the same two charts in the original press release. There are no tables at all and the few other charts in the study are merely illustrations of their theories. In fact, this report consists primarily of theories of bilingual education and criticism of the scientific method.

The methodology of the study is unscientific, as is the case with all of Virginia Collier's research. The criteria for a scientific study (see Rossell and Baker, 1996a, 1996b) are basically four-fold. First, there should be a treatment group—for example, LEP students in a bilingual program—and one or more comparison groups—for example, similar LEP students in one or more types of all-English programs. Second, the achievement of these students should be compared after some time period in their respective programs. Third, any differences between the students initially should be controlled for statistically in order to give each group a level playing field. (This is not necessary if there is random assignment.) Fourth, the *same* students must be followed over time since there is no way to statistically control or match on initial differences, nor

would it make any sense to do so if different students are in the study at different points in time. Although all four characteristics are essential, only the first two are found in the Thomas and Collier study.

A treatment and a comparison group are necessary in order to interpret outcomes. If students in a bilingual education program score at the 30th percentile, it is a positive effect if they would have scored at the 20th percentile in an alternative program, a negative effect if they would have scored at the 40th percentile in an alternative program, or no effect at all if they would have scored at the same 30th percentile in an alternative program. It is only this comparison of students in a bilingual program to students in an alternative program that enables us to evaluate what a score at the 30th percentile means.[2]

But comparing students in alternate programs is not enough. One must also statistically control for any pre-treatment differences between the two groups. If students are randomly assigned to different programs, a statistical control for pre-treatment differences is not necessary because we can be sure that any difference between the outcomes of the two programs is not a result of the characteristics of the students.

However, random assignment is rarely possible in the real world. In the real world, students are assigned to, or select themselves for, different programs based on their individual characteristics such as motivation, intelligence, social class, or learning problems. These differences that exist before the program will be confused with the effects of the program unless statistically eliminated. For example, if the students in a bilingual program are poorer than the students in an alternative program, it would be unfair to compare the two groups without adjusting statistically for these differences in social class.

It is also essential that the same students be followed over time because otherwise we have no way of knowing whether the students were initially comparable before the program. Nor would it make any sense to control for pre-treatment differences if there are different students before the treatment than there are after the treatment.

Virginia Collier's and Thomas and Collier's studies have some, but not all, of these essential characteristics. But rather than apologizing for this and cautioning the reader, as is the professional norm in our field, they attempt to discredit the scientific method. Some of their criticisms are valid and some are not. As they point out, the typical scientific study examines growth in achievement over a short time period because of the requirement to follow the same students over time. But where Thomas and Collier go wrong is that they pro-

pose to "solve" this problem by following *different* students over eleven grades, and to have no statistical control for pre-treatment differences. This is analogous to criticizing the judicial system for its failure to consistently result in conviction for the guilty and acquittal for the innocent and offering as the solution throwing the accused in a vat of water—if they are innocent they will float, otherwise they will sink.

Their other criticisms are also problematic. For example, they criticize Rossell and Baker (1996) for suggesting that "only studies in which students are randomly assigned to treatment and control groups are methodologically acceptable" (p. 20). In fact, that was never said. Of the seventy-two methodologically acceptable studies that we identified, only five had random assignment. The other sixty-seven were quasi-experimental—that is they had a treatment and a control group, as well as a control for pre-treatment differences in the absence of random assignment. Since a quasi-experimental design is both scientific and "do-able," Thomas and Collier really have no excuse for not using it in their study.

They also erroneously assert that the scientific method does not work because "At best, one might find a comparison group that received an alternative form of special assistance, but even this alternative is not easily carried out in practice" (p. 20). In fact, it is simple to find a comparison group because the vast majority of LEP children in the U.S. are in alternative programs. The California Department of Education language census, for example, (http://www.cde.ca.gov—Table 13) indicates that in 1997 only 29.7 percent of the LEP students in the state were enrolled in bilingual education. Even in Los Angeles, only 34 percent of the LEP students are enrolled in bilingual education. Thus, Thomas and Collier are wrong—it is easy to find a comparison group that has received an alternative form of special assistance and it is often possible "to carry this out in practice" if one is trained in social science research methods.

There are more errors in their criticism of the scientific method. On page twenty-two, they state that "If truly comparable local control groups are not available, one can construct a comparison group from the performance of other groups such as the norm group of a nationally normed test." Unfortunately, one *cannot* construct a comparison group from the norm group of a nationally normed test. First, LEP children are defined as LEP precisely *because* they score below the national norming group of fluent English speakers, and so the national norm group will always be higher. For example, a common criterion for classification as LEP is scoring below the 36th percentile and a common criterion for reclassification as no longer LEP (i.e., Fully English Proficient [FEP])

is scoring above the 36th percentile. Thus, no matter how effective a program is, children classified as LEP will by definition score below the average for fluent English speakers. Second, the *growth* in achievement of LEP children is much greater than the growth in achievement of FEP and native speakers of English because the tests are normed on a fluent English speaking population. If fluent English speaking children are making grade level progress they will leave a grade with the same score with which they entered. LEP children, by contrast, may make greater progress than this because they are getting two treatments: learning the English language and learning the subject on the test. Thus, the growth in the achievement of the two groups is not in any way comparable. Third, only half of all LEP children will reach the national norm because only half of all English monolingual children ever reach it. How is one to tell if the national norm is the right standard for any individual child? For some children it may be too high and for others too low. In short, a national norm group is not the right criterion by which to evaluate bilingual education. That Thomas and Collier continue to perpetuate this myth is both a major problem with their study specifically and with the field of bilingual education generally.

WHAT IS THE TREATMENT?

Thomas and Collier criticize current research because programs vary greatly in how they are implemented and it is difficult to tell exactly what is being evaluated in these studies. This is true, and their study has the very same problems because it is massive and covers a fifteen year period. In their own words, the study

> includes over 700,000 language minority student records, collected by the five participating school systems between 1982 and 1996, including 42,317 students who have attended our participating schools for four years or more. This number also includes students who began school in the mid-1970s and were first tested in 1982. (p. 30)

There is no way they can know exactly what is going on in these school districts because rather than doing their own research, they relied on school staff to define the programs. Although this is what most researchers do, it is a mistake. Having visited almost a hundred classes in my research on bilingual education, I have learned that not only can you *not* rely on school staff to define programs accurately, you cannot even rely on the teacher in the classroom to define her own approach accurately (see Rossell and Baker, 1996b, Chapter 4). Even today teachers will claim to be teaching bilingually in programs *currently* labeled bilingual education when actually they are teaching completely or almost completely in English. You absolutely cannot expect

teachers to reliably or accurately describe programs implemented fifteen years ago, even if you could find someone who had been in the school system that long.

There are, of course, problems with all studies, but what is striking about Thomas and Collier is their failure to acknowledge that their study has these or any other problems. Indeed, quite the contrary, they believe their own study overcomes the limitations of previous research. They are wrong.

PURPOSIVE SAMPLING

Thomas and Collier acknowledge one limitation when they admit that

> our findings are generalizable only to well-implemented, stable programs from school systems similar to those in our study. This is not accidental. We intended to select a purposive sample of above-average school systems...all of which were well implemented by experienced, well-trained school staff. (p. 28)

However, they never define "well-implemented," "stable," "above-average," "experienced," or "well-trained." Indeed, no data are presented on any of the characteristics of any of these programs, the children enrolled in them, the schools in which they reside, or the school districts. *We literally know nothing about these school districts and their schools* other than the fact that there are five of them and they are "moderate-to-large, urban and suburban school systems from all over the U.S." (p. 30). Even their programs are defined only in broad generalities that could apply to any program of that type in any district. Since the schools and school districts are not named, there is no way to check their assertions that these are well-implemented programs, or even that they are *equally* well-implemented programs—that is, well-implemented across program types.

Even if it were possible to define "well-implemented," how could one do so across eleven grades and a fifteen-year time period from 1982 to 1996? Thomas and Collier never tell us. They collected information on program quality and classroom atmosphere by holding "focus groups." They explain this process as follows:

> To measure school program effectiveness in each school district, we began by interviewing school staff to identify and reach a consensus on definitions of programs and their implementation. We did this through focus groups with bilingual/ESL teachers and resource staff. Through these group interviews, we uncovered differences from one school dis-

> trict to another in the labels given to programs, but consistency in general characteristics of differences between programs. We have chosen here to report these findings by using the names of general program labels in bilingual/ESL education. (p. 48)

We do not know what questions were asked or what topics were discussed. Nor do we know when during the fifteen-year period these focus groups were held, how many were held, and how information obtained in this process helped to define programs and evaluate the "atmosphere." In the determination of how "bilingual" a program is, focus groups are neither a proper nor an adequate substitute for observations of classrooms. They are also not a substitute for hard data on program quality. These data might include class size, teacher qualifications, percentage of English used in instruction, racial composition of the classroom and school, percentage eligible for free or reduced lunch in the classroom and school, percentage classified LEP, and so forth. None of this is in the report, and there is no promise of it in future reports. In fact, in twenty-five years of reading technical reports, I do not think I have ever read one with so little information in it. Certainly, I have never read a federal grant report with so little information.

The last federal grant report I wrote (Steel, Levine, Rossell, and Armor, 1993), had seventy-four tables, fifty-nine charts, and 134 pages of appendices explaining the sampling procedure, the characteristics of the sample, and the methodology. Approximately 37 percent of the report was devoted to tables and charts, and 68 percent of the report was devoted to tables, charts, and appendices explaining sampling procedures, sample characteristics, and methodology. Our appendices also included the complete text of the questionnaire that we used. Another federal grant report, this one by Ramirez et al. (1991), contained even more tables and figures than ours, although proportionately it was about the same. This two-volume report contained 1,148 pages of which there were 478 tables and 228 figures on the characteristics of the sample, the outcomes, and the statistical analysis. The methodology was explained in intricate detail, and the tables and figures represent about sixty-one percent of the report.

The Thomas and Collier report by contrast has no tables at all, no information on the characteristics of the sample and methodology, and no statistical analyses. The two figures represent only one percent of the report. This appears to be a new low in federal grant reporting.

METHODOLOGY

Because of the lack of information in the report, it is hard to know exactly what Thomas and Collier have done. As a result, this has generated some

confusion among experts in bilingual education. One prominent expert who has read the study believes their line graphs reprersent not real achievement, but *predictions* of what these students would achieve. This assumption is fueled by the fact that the test scores cover eleven grades, but the longest study that anyone knows about is five years—(the Ramirez et al. [1991] study which is apparently no longer in their database).[3] What people don't realize is that this is not a true longitudinal study because most of the students in the sample have only four years of data, and there are almost no students with eleven grades of data. Thus, each grade consists of different students. Rather than apologize for this, they brag about it. Indeed, they claim to

> have greatly increased the statistical power of our study with very large sample sizes. We have achieved these sample sizes, even when attrition reduces the number of students we can follow over several years, by analyzing multiple cohorts of students for a given length of time (e.g., seven years) between major testings. (p. 28)

Thomas and Collier do not tell us the size of each cohort, their initial test scores, their ethnicity, their social class, nor how they were matched—that is, what leeway was allowed in the matching and at what point in their education. The explanation for their procedure is provided in only a few paragraphs:

> The sample figure below illustrates eight available seven-year testing cohorts for students who entered school in Grade 1, were tested in Grade 4, and who remained in school to be tested in Grade 11.
>
> We then analyzed multiple cohorts of different students over a shorter time period (e.g., six years), followed by successive analyses of different students in multi-year cohorts down to the four-year testing interval. In doing this, we have in effect "modeled" the typical school system, where many students present on a given day have received instruction for periods of time between one and twelve years. Typically, the shorter-term cohorts (e.g., four years) contain more students than the longer-term cohorts since students have additional opportunities to leave the school system with each passing year.
>
> Using this approach, we are able to "overlay" the long-term cohorts with the shorter-term cohorts and examine any changes in the achievement trends that result. If there are no significant changes in the trends, we can then continue this process with shorter-term cohorts at each stage. If significant changes occur in the data trends at a given stage, we pause and explore the data for possible factors that caused the changes. (pp. 28–29)

The above paragraphs are pretty much the sum total of the explanation of their methodology (although they repeat it again on pp. 53–54), and they are

Table 1
Years and Grades of Test Administration

	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
Cohort 8								4		6		8			11
Cohort 7							4		6		8			11	
Cohort 6						4		6		8			11		
Cohort 5					4		6		8			11			
Cohort 4				4		6		8			11				
Cohort 3			4		6		8			11					
Cohort 2		4		6		8			11						
Cohort 1	4		6		8			11							

Source: Thomas and Collier (1997: 29).

simply inadequate. Moreover, the first sentence—that students entered in first grade were tested in fourth grade and remained in school until eleventh grade—contradicts the fourth sentence that says there were shorter-term cohorts of four years and that these contain more students than the longer-term cohorts. In addition, Table 1 shows exactly eight years of data for each cohort. Where are the four-year cohorts that Thomas and Collier refer to? Where are the five-year cohorts, and so forth? Why do Thomas and Collier refer to the cohorts as seven-year cohorts when eight years of achievement data are portrayed in the table?

It appears that the cohorts were defined by the year (1982, etc.) they started analyzing achievement data. Each cohort, however, is comprised of different students tested at different times—that is, they "overlay" the long-term cohorts with the shorter-term cohorts. Thomas and Collier never tell us how many students were followed over four years and what percentage of the total program enrollment they represent, nor how many students were followed over five years and what percentage of the total program enrollment they represent, and so forth. There is just a vague reference to the fact that there are more students in the shorter-term cohorts.

Their discussion of matching students is also inadequate. They claim to be

> "blocking," first to group students using categorical or continuous variables that are potential covariates, and then later to use these groups as another independent variable in the analysis. Essentially, all student scores

> that fall into the same group are considered to be matched (Tabachnick & Fidell, 1989, p. 348) and the performance of each matched group within each level of program type can be compared. Each group can then be followed separately and its performance on the outcome variables (typically test scores) can be investigated separately from that of other groups of similar students. Interactions between the new independent variable represented by the blocked groups and other independent variables (e.g., type of program) can be investigated.... However, when the assumptions of ANCOVA [analysis of covariance]could be met, we used ANCOVA as a supplement to blocking, in order to take advantage of the benefits of both techniques in situations where each works best. In some of our analyses, we used an expanded, generalized form of ANCOVA. (p. 27)

But what scores did they match on? Which groups of students were matched and how? Their charts do not follow each group separately and they never give us this information. Nor is there a single statistical analysis in this report. When and where did they use ANCOVA, and what happened to the results? Why did they not present them?

NUMBER OF YEARS IN THE PROGRAM

Thomas and Collier ignore the number of years students spent in the program. They justify this on the grounds that ESL pullout programs are designed to be short-term, limited instructional support: "There are no four year, five year, or six year ESL-pullout programs in existence in our participating school systems" (p.54). However, in every one of the school systems I have personally analyzed, students were in ESL pullout programs until they were re-designated. Since the criterion for re-designation was often a percentile criterion that was not achievable by a third or a half of all English monolingual students (e.g., the thirty-sixth or fiftieth percentile)—let alone students who are still learning English—some students received ESL support their entire elementary school careers. This is also true of so-called early exit bilingual programs—that is, some students exit after two or three years and some are in them for their entire elementary school careers. Thus, not controlling for length of time in the program introduces error into an analysis.

VALIDATION OF RESULTS

Thomas and Collier assure the reader that they "validated" the findings from their five participating school systems by "visiting" other school systems in twenty-six U.S. states during the past two years and asking the school districts to "verify" their findings. But they never tell us what "validate" and "verify" mean. Does it mean having conversations with people? Does it mean

checking the statistics of other school districts to see if they are similar? If so, how similar would they have to be to qualify as "validation"? Since school districts typically do not keep longitudinal data like this (and if they do, it is not readily accessible), it is hard to believe it is the latter. We will never know what "validate" and "verify" mean because Thomas and Collier just do not think it is important to tell us.

DISCARDING UNWANTED RESULTS

Although Thomas and Collier state that "each school district's data [is] analyzed separately" (p. 30), they do not explain what that means. The chart shows six lines for five school districts. How many programs per school district are there? If the five school districts are analyzed separately, why are there only six lines?

They apparently discarded results they thought were not "generalizable":

> We first examined patterns in one school district, to see if any program or instructional variables appeared to have strong influence on language minority students' achievement. Then if a *particular pattern* emerged, we assumed it was not generalizable beyond the context of that school system, unless we found a *similar pattern* in a second school system. Once the *same pattern* appeared *repeatedly* in the data across more than two research sites, we *started to assume some generalizability*. The patterns that we are repeating here are general academic achievement patterns across all five of our research sites. [Emphasis added] (p. 48)

Discarding results you don't like is an unacceptable approach to data analysis. It also means that this study can never be replicated since everyone will have a different perception of such words and phrases as "similar pattern," "repeatedly," and "started to assume some generalizability."

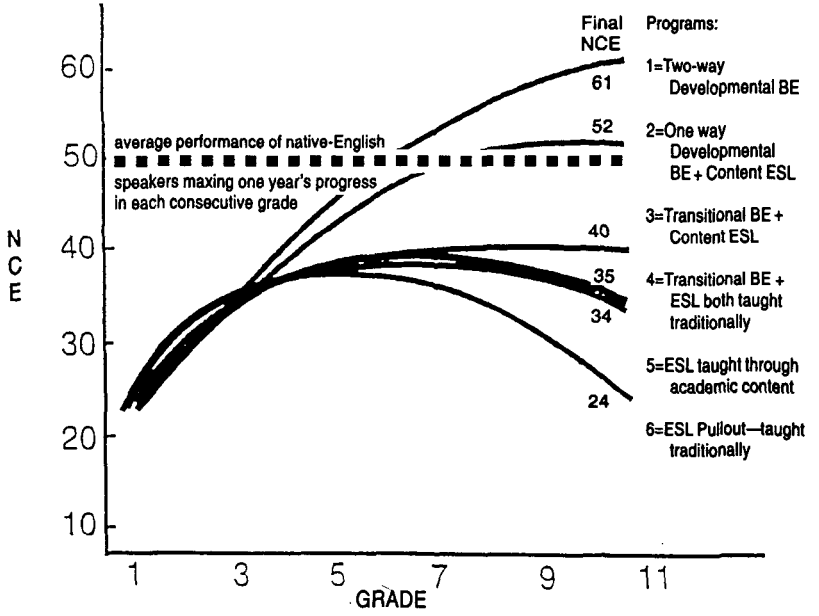
NEW DATA, SAME TRENDS

Another oddity is that the trend lines in Figure 1 in this report appear to be the same as those in Thomas and Collier's 1995 press release (despite the fact that the Ramirez et al. (1991) study was apparently dropped from their database and two more years of data added). How does this happen? Well, if the researchers think it is perfectly fine to pick and choose among achievement trends, selecting only those that "assumed some generalizability," how could it not happen? Any new data that deviates from the earlier pattern is discarded because it is not "generalizable." Thomas and Collier have thus taken a giant step backwards from the scientific goal of establishing research standards that

Figure 1
Thomas and Collier's Chart of Elementary School Programs

Figure 6

PATTERNS OF K-12 ENGLISH LEARNERS' LONG-TERM ACHIEVEMENT
IN NCES ON STANDARDIZED TESTS IN ENGLISH READING
COMPARED ACROSS SIX PROGRAM MODELS
(Results aggregated from a series of 4–8 year longitudinal studies
from well-implemented, mature programs in five school districts)



Source: From *School Effectiveness for Language Minority Students* (p. 53) by W. P. Thomas & V. Collier, December 1997, NCBE Resource Collection Series, No. 9. Washington, DC: National Clearing House for Bilingual Education. Copyright by Wayne P. Thomas and Virginia P. Collier, 1997. Reprinted with permission from NCBE and Thomas and Collier. http://www.ncbe.gwu.edu/ncbepubs/resource/effectiveness/thomas-collier97.pdf

are objective and verifiable. Once again, they do not even apologize for it. Quite the contrary, they think this is progress!

Overcoming Poverty

Thomas and Collier claim that "the schools with the highest achievement levels were so effective that the effect of these programs overcame the power of student background variables such as poverty" (p. 48). But the only analysis that would justify such an assertion would be one showing that children of

lower social class were scoring the same or higher than children of higher social class controlling for the students' years in this country, years in their programs, age, and initial language fluency. Since they apparently did no statistical analysis of this kind, they cannot know that the programs have overcome the effects of poverty. If these programs had actually overcome the effects of poverty they would be the first in the four decades of social experimentation in the U.S. and the world would be beating a path to their door.

FIRST TESTED IN FOURTH GRADE

According to Thomas and Collier, the students in their study were first tested in fourth grade. This may be true of the students in bilingual education, but it would be an oddity to have a student in an ESL program not tested until fourth grade. It is equally odd, however, that although the students were apparently not tested until fourth grade, Thomas and Collier's elementary graph in Figure 1 shows test scores that average approximately 22 in first grade and 35 by third grade. Where do these data come from? How can students who enter school with no proficiency in English be scoring at the twenty-second percentile by first grade regardless of the type of program they are in? Why did the 1995 chart have the same average score of 22 in *kindergarten* when presumably no students had been tested? Thomas and Collier do not explain any of these issues.

ONLY READING ACHIEVEMENT?

Another of the many mysteries in this report is why the authors only examined reading achievement. They claim this is justified because reading involves more complex problem-solving across the curriculum than do language arts. However, they are silent on why they did not also analyze math test scores, presumably a subject involving complex problem-solving.

It is interesting that the two achievement areas that Thomas and Collier failed to analyze in their report—language arts and math—are the two areas where bilingual education does the worst. In our review of the research on bilingual education (Rossell and Baker, 1996a, 1996b), Keith Baker and I found that transitional bilingual education was *worse* than "doing nothing" (also called submersion) only 33 percent of the time in reading achievement, but 64 percent of the time in language achievement, and 35 percent of the time in math achievement. Transitional bilingual education was *better* than doing nothing 22 percent of the time in reading achievement but only 7 percent of the time in language achievement and nine percent of the time in math achievement. In short, although Thomas and Collier try to justify this on other grounds, they analyzed only the subject area where bilingual education is most successful.

ATTRITION BIAS

Thomas and Collier claim to be studying the best implemented programs. Regardless of whether this is true, they *are* studying the best students since these are the only ones with test scores over a four-year period. This is called *attrition bias*, and it is a problem that all longitudinal studies have. It can lead to misleading conclusions if the program is only effective for the most stable people but not for the whole population in the program. As with many issues in this report, Thomas and Collier are silent on the extent to which attrition bias might be a problem in their study.

NON-TESTING OF BILINGUAL EDUCATION STUDENTS

There is a huge differential testing bias in bilingual program evaluations that I have only recently become aware of—a much smaller percentage of the bilingual education students are tested than of the all-English LEP students. For example, the Los Angeles Unified School District recently reported higher achievement for students who had stayed in the bilingual program for five years compared to similar students in the mainstream, but almost 40 percent of the students in the bilingual program were thought to not know enough English after five years to be able to take the test. By contrast, 97 percent of the all-English program LEP students took the test (Zacaria, 1998).

Recent data from a fifty-four percent Hispanic school district of 17,000 students in California shows a similar pattern. In this district only 36 percent of the Spanish speaking LEP students, almost all of whom were in bilingual education, were tested, but 83 percent of the non-Spanish speaking LEP students, all of whom were in all-English programs, were tested. Similarly, in the Ramirez et al. (1991) study, 89 percent of the immersion strategy students were tested in the K–1 analysis, but only 61 percent of the early exit students were tested. In the grades 1–3 analyses, 42 percent of the immersion strategy students were tested, but only 29 percent of the early exit students were tested.[4] That study found no difference between the two programs, but this obviously underestimates the benefit of immersion and overestimates the benefit of bilingual education since it is the poorest students who are not tested and there are more untested students in the bilingual education program.

ENROLLMENT IN EACH ELEMENTARY SCHOOL PROGRAM

To reiterate, from over 700,000 student records, Thomas and Collier were able to identify 42,317 student records in four-year, five-year, six-year, and so on up to eight-year *overlapping* testing cohorts to demonstrate a "longitudinal perspective." Thus, the records analyzed actually represent 6 percent of the

total database and lots of different students at each point. Each line has an underlying long-term longitudinal cohort, with a series of overlapping shorter-term longitudinal cohorts. Each line in the graph represents a weighted average (which they do not explain) of all the cohort scores available at each grade level. The only data presented in the report are the six lines representing six programs in Figure 1 (Figure 6 in their report) and the two lines in Figure 8 in their report, for two high school ESL programs. (There are no students in bilingual education during high school.)

Although Thomas and Collier do not give us information on numbers of students in each cohort or program or grade, they do provide us with overall percentages. Three percent of the students were in two-way bilingual education (line one in Figure 1); 7 percent were in one-way developmental (or maintenance) bilingual programs (line two); 9 percent were in transitional bilingual education with ESL taught through academic content (line three); 17 percent were in transitional bilingual education taught "traditionally," which apparently includes ESL taught "traditionally" (line four); 13 percent were in ESL content (line five); and 51 percent were in ESL pullout (line six). These percentages also refute Thomas and Collier's claim that it is difficult to assemble a comparison group since 64 percent of the students in their sample were in a comparison group.

These overall percentages raise as many questions as they answer because Thomas and Collier do not tell us how they were calculated. The calculation of percentages is not trivial in a study that consists of different students in each grade. Furthermore, with only 3–7 percent of the students enrolled in the developmental bilingual education programs, one can only wonder how many students actually had eleven years of data—it is not inconceivable that there were virtually none. This would explain why no sample sizes are shown for each grade and program.

PROGRAM DEFINITIONS

Two-way Developmental Bilingual Education

Thomas and Collier define two-way bilingual education as follows: "language majority and language minority students are schooled together in the same bilingual class, and they work together at all times, serving as peer teachers" (p. 58). Both the 90–10 (ninety to one hundred percent Spanish in Kindergarten and first grade, reaching fifty/fifty by fourth or fifth grade) and the 50–50 (Kindergarten to fifth grade, half a day in Spanish) are included in the two-way bilingual education models. Thus, programs using very different amounts of Spanish are lumped together.

Many people who have looked at these data, including advocates of bilingual education, believe that Thomas and Collier combined the test scores of native speakers of English and limited English proficient students. Most people are willing to say it only verbally, but Kathryn Lindholm has put it in writing. She cites Collier's discussion of bilingual education theory (1995) and the findings of the Thomas and Collier study of 1995 for the proposition that

> ...the results of the Spanish and English speakers are aggregated rather than separated by language group (Christian, Montone, Lindholm & Carranza, 1997; Collier, 1995). (Lindholm, 1998:4)

Yet, Thomas and Collier do not admit to this, and their brief discussion states that they only looked at limited English proficient students:

> ...It is important to remember that this figure represents cohorts of students who start school with the same general background characteristics—i.e., no proficiency in English and low socio-economic status as measured by eligibility for free or reduced lunch. (pp. 53–54)

School districts that do break data down by Spanish and English native speakers have the following test scores for Hispanic and white students in two-way immersion programs.

Table 2 contains data from the Hernandez two-way bilingual programs in Boston. Where there is no data means there were less than seven students who took the test (or knew enough English to take the test). In grades one through three, apparently less than one-third of Hispanics in the school knew

Table 2
Reading Test Scores (Metropolitan) for Hispanic and White Students at Hernandez Two-way Bilingual School, Boston, MA, May 1993

		GRADES							
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Hispanics:	Reading Score	—	—	—	43	30	30	25	39
	Enrollment	*(26)*	*(26)*	*(25)*	*(25)*	*(22)*	*(19)*	*(10)*	*(15)*
Whites:	Reading Score	—	88	98	—	—	—	—	—
	Enrollment	*(5)*	*(9)*	*(7)*	*(5)*	*(6)*	*(2)*	*(0)*	*(3)*

Note: No data means less than seven students took the test.
Source: Boston Public Schools (1994).

Table 3
Reading Test Scores (CAT 5) for Hispanic and White Students by Language Proficiency at the River Glenn Two-way Bilingual School, San Jose, CA, Spring 1997

		Language Fluency Classification			
		LEP	**FEP**	**English Only**	**TOTAL**
Hispanics:	Reading Score	20	41	33	
	Enrollment	*(150)*			(283)
Whites:	Reading Score	—	—	65	
	Enrollment	*(0)*	*(0)*	*(113)*	*(113)*

Source: San Jose Unified School District (1998).

Table 4
Reading Test Scores in Grade Equivalents (CAT) for Hispanic and White Students in the Amigos Two-way Bilingual Program, Cambridge, MA, Spring 1991

		Grades		
		1	**2**	**3**
Hispanics:	Reading Score	1.29	3.11	2.87
	(% Tested)	*(46%)*	*(67%)*	*(47%)*
Whites:	Reading Score	1.30	5.09	4.70
	(% Tested)	*(67%)*	*(100%)*	*(86%)*

Source: Cazabon, Lambert, and Hall, (1991), p. 8, 14–16.

enough English to take the test. In the later grades it might be only slightly more than that. The Hispanic students who know enough English to take the test in this well regarded, two-way bilingual program are scoring at the 39th percentile even as late as eighth grade. But virtually all English speakers take the test and they do superbly—average scores between the 88th and 98th percentiles.

Table 3 shows the results for Hispanic and white students by language proficiency at the River Glen Two-way Bilingual School in San Jose, California. The Hispanic achievement in this two-way bilingual program is similar to the

Hernandez School—it ranges from the 20th to the 41st percentile. Across all language proficiency levels, Hispanic students in this school are low scorers, about half that of the whites.

Table 4 shows English reading achievement data expressed in grade equivalent scores for Hispanic and white students in the Amigos Two-way Bilingual program in Cambridge, Massachusetts. In the spring of the year, a grade-level score (i.e. the 50th percentile)[5] for first grade would be 1.7, for second grade it would be 2.7, and for third grade it would be 3.7. The Hispanic students in this two-way bilingual program are below grade level at each grade. The whites are also below grade level in English in first grade when most of the instruction is still in Spanish. By second grade they are well above grade level and have twice the achievement of the Hispanic students.

As these data make clear, the Hispanic students in well-regarded, two-way bilingual programs in real school districts score only about half as well as white students and well below the Thomas and Collier Hispanic achievement data, even though only the top Hispanic students are tested. Even in the Hernandez School in Boston, which has data through eighth grade, Hispanic test scores are at the 39th percentile, not the 55th that is shown in Thomas and Collier's graph. Since their data do not match the Hispanic achievement found in other well-regarded, two-way bilingual programs, it is not surprising that people believe Thomas and Collier have combined the test scores of whites and Hispanics.

One-way Developmental Bilingual Education

Historically referred to as maintenance bilingual education or late-exit bilingual education, Thomas and Collier define one-way developmental bilingual education as "academic instruction half a day through each language for Grades K–5 or 6" (p.58). Originally planned for Kindergarten through twelfth grade, it has rarely been implemented beyond elementary school level in the U.S. Although one-way developmental bilingual education programs are nine points below the two-way programs, they are twelve points above transitional bilingual education. Some of this advantage for developmental programs (one-way and two-way) might be self-selection bias.

Thomas and Collier present no statistics on the social class or English fluency of the students enrolled in these programs. However, published reports from school districts with two-way programs indicate that developmental bilingual programs are likely to have significant numbers of fluent-English-speaking Hispanics enrolled in them in order to develop their Spanish. For example, according to a survey of students conducted in the Cambridge Amigos pro-

gram, 41 percent of the fifth and sixth grade Spanish Amigos and 53 percent of the fourth grade Spanish Amigos hardly ever or never speak Spanish at home with their parents or brothers or sisters. This suggests that they started the program as fluent English-speakers and come from homes where English is the medium of communication.

In addition, the Hispanic students in developmental programs tend to be of higher social class. In San Jose, for example, only 29 percent of the Hispanic students in the River Glenn two-way bilingual program are eligible for free or reduced lunch compared to the district percentage for Hispanics of 67 percent.

Transitional Bilingual Education (TBE) Plus Content

Also called "early-exit bilingual education," Thomas and Collier define this approach as "academic instruction half a day through each language and gradual transition to all-majority language instruction in approximately 2–3 years" (p. 58). Again, I quarrel with their definition. The early exit programs I am familiar with teach almost completely in Spanish in kindergarten. In first grade they teach reading and writing in Spanish and all subject matter in Spanish with only an hour or so a day of English. In second grade, some subject matter may be taught in English but only if there are no new non-English-speaking students. In short, the first two years of these early-exit programs are almost completely in Spanish, although their goal is to transition the students to an all-English program as soon as possible. Thus, my experience is that the major difference between developmental and transitional (or early-exit) bilingual education in the first two years is the goal, not the amount of English.

English-as-a-Second Language (ESL)

Thomas and Collier describe ESL as coming in two forms:

1. ESL academic content, taught in a self-contained classroom (also referred to as sheltered instruction or structured immersion) which varies from a half-day to a whole-day; and
2. ESL pullout which varies from 30 minutes per day to a half day or at the secondary level from one to two periods per day.

In Figure 1 (Figure 6 from their report), line five is ESL academic content and line six is ESL pullout.

WHY A DESCRIPTIVE COHORT ANALYSIS IS NOT A METHODOLOGICALLY ACCEPTABLE DESIGN

None of the major research reviews have accepted a descriptive cohort analy-

sis of the type Thomas and Collier offer as scientific evidence of the effectiveness of a program. A descriptive cohort analysis is generally unacceptable because it consists of different students at each point in time and there is no control for student characteristics.

In Appendix 2, I demonstrate how it is mathematically possible for the average achievement for a bilingual program to increase from fourth through eleventh grade (eight years) even though each individual student in the program experienced a decline over the four years of testing. I produced this phenomenon by doing just what Thomas and Collier did—I overlaid a series of about ten or so sets of four years of hypothetical achievement data beginning and ending at different points in the eleven year grade-span for each program.

I was able to do this so that each individual cohort had the opposite pattern of the overall average for each grade. For example, each hypothetical student in the two-way bilingual education program had a decline in achievement over their four or so years of data, but the overall average for each grade in the bilingual program went up dramatically. Conversely, each hypothetical student in the ESL pullout program had an increase in achievement over their four years or so of data, but the overall average for each grade in the ESL program went down across the whole eleven years. This mathematical phenomenon is well known among social scientists trained in statistics, and it is why the methodology used by Thomas and Collier—a simple descriptive cohort analysis—is not a valid means of evaluating programs and will continue to be rejected by scientists.[6]

SECONDARY SCHOOL ACHIEVEMENT

Thomas and Collier do not analyze bilingual education programs at the secondary level because they feel there are not enough years to warrant analysis. As with the chart on elementary school programs, they present no data whatsoever on the school districts, schools, and students, and there are no statistical analyses of any kind. There are two programs analyzed—ESL through academic content (sheltered subjects) and ESL with traditional approaches, shown in Figure 8 of their report. Again, they examine only reading achievement. The descriptive cohort analysis shows these students apparently began school in fifth or sixth grade and by the eighth grade were scoring at the 20th percentile. By eleventh grade, they are at the 36th percentile in ESL through content and the 25th percentile in ESL taught traditionally. All of the important problems identified in the elementary school program analysis apply to the secondary school analysis.

CONCLUSIONS

The Thomas and Collier study has two serious flaws. First, it uses a methodology—a simple descriptive cohort analysis—that is unscientific and that can produce misleading results as I have demonstrated in Table 5. The method is unscientific because each grade consists of different students, the number of students in each grade is not given and could be quite small, there is no statistical control for pretreatment differences, the programs are elementary school programs, but the test scores shown after elementary school are of different students from those in the elementary programs. Even if they were the same students, it would be hard to imagine how a program that a student participated in years earlier would influence him or her without controlling for the student's characteristics and the characteristics of his or her current school and program. Equally as egregious is the fact that Thomas and Collier have admitted they selected only the trends that they thought "assumed some generalizability."

The second serious flaw in the Thomas and Collier report is that they explain very little about their methodology. They present no data whatsoever on their sample or any statistical analyses. Normally a federally funded grant would have a final report that included at a minimum, dozens of tables in the text and in appendices with the characteristics of the sample, their outcomes, and the methodology used. This report has virtually no data in it and sets a new low in federal grant reporting.

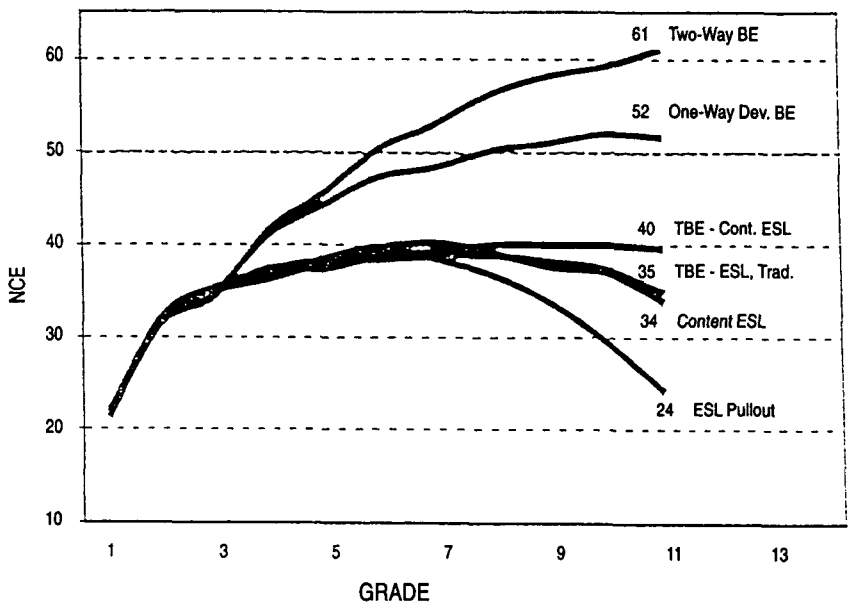
NOTES

1. I say "so-called Collier study" because in reality the study is co-authored with Wayne Thomas, a fact which is usually absent from the public discourse on the topic.
2. There is probably no issue on which people are more confused than the issue of what standardized achievement tests mean. These tests are constructed and the questions selected in order to produce a bell shaped curve wherein students are rank ordered into one hundred different categories. By definition, half the students will score at or below the 50th percentile no matter how good a job the U.S. educational system (the norming group) has done in educating children and no matter how intelligent and knowledgeable the students are. Similarly, 30 percent of the students will score at the 30th percentile or below no matter how smart the population as a whole is. These tests are useful, however, for comparing alternative programs since the limitations of the tests—that is that they only rank order students—is a constant across programs.
3. In their 1995 press release, Thomas and Collier report that they have acquired the data-set and, *where* appropriate, *combined* the results with those from their school district sites.

4. This is calculated by dividing the number of students with pre-test data in the Kindergarten through first grade and first through third grades analyses combined for each program type (Ramirez et al. [1991], Table 13, p. 60 and Table 14, p. 61 in Volume II) by the number of students who were initially in the study in each program type (Table 11, p. 51 in Volume I).
5. One of the many issues that people are confused about is what grade level means. It has no absolute meaning. It simply means the fiftieth percentile for that grade, and it is a mathematical definition that only one-half the student population can be at grade level.
6. Unfortunately, this is a technique that is used widely by school districts, and it is one of the many ways in which they are their own worst enemy. For example, school districts are constantly disseminating trends in achievement data that show declining achievement. Since each year consists of different students (perhaps one-half to two-thirds are the same from one year to the next), it is possible for each student to have an increase in achievement, but the overall average to go down because the top scoring students have left the school system. These data are then used by the press and elected officials to criticize school districts for doing a poor job of educating students when in fact the exact opposite may be true.

APPENDIX 1

Averages from Thomas and Collier's Figure 6 Produced by Hypothetical Individual Cohort Data that have Reverse Trends: Elementary Programs



APPENDIX 2

An Example of What is Wrong with a Cohort Analysis

In Table 5, I demonstrate mathematically why a cohort analysis is unacceptable. I have taken the approximate averages from Figure 1 (Figure 6 of Thomas and Collier) and created hypothetical data that produces these averages. I maintained Thomas and Collier's parameters (p. 54):

- A minimum of four years of data;
- First tested in fourth grade;
- At least one long-term cohort "confirming the general longitudinal pattern"; and
- One type of program during the elementary years.

I also maintained the overall average for each program in each grade.

The overall averages for each program in each grade, produced by the hypothetical cohorts I created, are reproduced as a graph in Appendix One so the reader can confirm that these averages do indeed produce trends in achievement that are virtually identical to those in Thomas and Collier's graph in Figure 1. This visual comparison of the graphs is necessary because Thomas and Collier present no data whatsoever in their report. The only thing we have to go on are the lines in the charts. As one can see, the two graphs look the same because I have closely approximated the averages for each program.

The first program listed in Table 5 is the two-way bilingual education program. I have created thirteen hypothetical cohort records of achievement of equal weight with a minimum of four years. Since these students were apparently first tested in grade four, there are no data for grades one to three and the average is simply entered at the bottom with identical numbers for all the programs—22, 32, 35—to approximate the curve in their graph. The first cohort I have created has scores for seventh to eleventh grade, the second cohort for sixth to eleventh grade, the third cohort for fourth to eighth grade, and so forth. The column marked "Change, 4th to last" is calculated for each individual cohort from their first score to their last score.

The average for each grade is simply the sum of the student achievement scores for that grade, regardless of the fact that each grade is composed of different students at each point in time. This is what a cohort analysis is. To illustrate for fourth grade—the average of 42 at the bottom is the sum of 20, 45, 55, 25, 10, 65, 57, 55, and 42 divided by nine (the number of students with scores for that grade). This is computed in the same way for each grade. From fourth to

Table 5
Trends in Average Achievement at Each Grade from Thomas and Collier's Figure 6 Produced by Hypothetical Individual Cohort Achievement Data with Reverse Trends: Elementary Programs

Programs		Grades											Change	
		1	2	3	4	5	6	7	8	9	10	11	4th-Last	6th-Last
Two-way Bilingual Education														
	Cohort 1							75	62	66	62	61	-14	-14
	Cohort 2						85	85	69	64	65	61	-24	-24
	Cohort 3				20	17	16	20	18				-2	2
	Cohort 4				45	45	40	41					-4	1
	Cohort 5				55	56	45	51					-4	6
	Cohort 6				25	24	23	22					-3	-1
	Cohort 7				10	6	6	8					-2	2
	Cohort 8				65	66	65	55					-10	-10
	Cohort 9				57	53	55	55	51	50			-7	-5
	Cohort 10						85	85	74	58			-27	-27
	Cohort 11					90	75	80	62	61	60		-30	-15
	Cohort 12				55	52	59	60	59	50	50		-5	-9
Representative Cohort →	Cohort 13				42	45	50	53	56	58	59	61	19	11
Possible Scores of Students not Tested				*3*	*5*	*3*	*6*	*7*	*10*	*11*	*13*	*16*	*14*	*13*
	Average	**22**	**32**	**35**	**42**	**45**	**50**	**53**	**56**	**58**	**59**	**61**	**19**	**11**
	Avg. of 1–12	**22**	**32**	**35**	**42**	**45**	**50**	**53**	**56**	**58**	**59**	**61**	**19**	**11**
Developmental BE														
	Cohort 1				18	15	15	14					-4	-1
	Cohort 2				45	40	35	35					-10	0
	Cohort 3							70	55	51	52	52	-18	-18
	Cohort 4				60	54	53	52					-8	-1
	Cohort 5					48	41	40	36				-12	-5
	Cohort 6						78	72	60	51	52	51	-27	-27
	Cohort 7					64	62	56	50				-14	-12
Representative Cohort →	Cohort 8				41	44	47	48	50	51	52	52	11	5
Possible Scores of Students not Tested				*3*	*5*	*3*	*6*	*7*	*10*	*11*	*13*	*14*	*12*	*13*
	Average	**22**	**32**	**35**	**41**	**44**	**47**	**48**	**50**	**51**	**52**	**52**	**11**	**4**
	Avg. of 1–7	**22**	**32**	**35**	**41**	**44**	**47**	**48**	**50**	**51**	**52**	**52**	**11**	**4**

Table 5 (continued)

Programs		Grades											Change	
		1	2	3	4	5	6	7	8	9	10	11	4th-Last	6th-Last
TBE + Content ESL														
	Cohort 1				18	18	18	18					0	0
	Cohort 2				30	29	28	30					0	2
	Cohort 3				38	33	34	35					-3	1
	Cohort 4				54	50	46	46					-8	0
	Cohort 5				47	48	46	42					-5	-4
	Cohort 6							56	45	39	40	39	-17	-17
	Cohort 7					34	33	32	30				-4	-3
	Cohort 8						56	46	45	41	40	40	-16	-16
	Cohort 9					50	49	49	40				-10	-9
Representative Cohort →	Cohort 10					37	39	39	40	40	40	40	3	1
Possible Scores of Students not Tested				*3*	*5*	*3*	*6*	*7*	*10*	*11*	*13*	*14*	*12*	*13*
	Average	**22**	**32**	**35**	**37**	**37**	**39**	**39**	**40**	**40**	**40**	**40**	**3**	**0**
	Avg. of 1–9	**22**	**32**	**35**	**37**	**37**	**39**	**39**	**40**	**40**	**40**	**40**	**3**	**0**
TBE + ESL Traditional														
	Cohort 1				25	24	23	25					0	2
	Cohort 2				33	33	33	33					0	0
	Cohort 3				43	43	43	43					0	0
	Cohort 4				42	42	42	42					0	0
	Cohort 5					45	45	46	45				0	0
	Cohort 6				39	39	39	39					0	0
	Cohort 7						43	44	41	43			0	0
	Cohort 8						36	37	35	36			0	0
	Cohort 9							40	38	38	40		0	0
	Cohort 10				42	42	42	42					0	0
	Cohort 11							35	35	36	35	35	0	0
Representative Cohort →	Cohort 12				37	38	38	39	39	38	37	35	-2	-3
Possible Scores of Students not Tested				*3*	*5*	*3*	*6*	*7*	*10*	*11*	*13*	*14*	*12*	*13*
	Average	**22**	**32**	**35**	**37**	**38**	**38**	**39**	**39**	**38**	**37**	**35**	**-2**	**-3**
	Avg. of 1–11	**22**	**32**	**35**	**37**	**38**	**38**	**39**	**39**	**39**	**37**	**35**	**-2**	**-3**

Table 5 (continued)

Programs			Grades										Change	
			1	2	3	4	5	6	7	8	9	10	11	4th-Last	6th-Last
ESL through academic content															
	Cohort	1				34	36	39	39					5	0
	Cohort	2				34	36	39	39					5	0
	Cohort	3				40	42	50	51					11	1
	Cohort	4						28	30	32	40			12	12
	Cohort	5							30	31	32	34	34	4	34
	Cohort	6							40	40	40	43		3	43
	Cohort	7								25	29	34	34	9	34
	Cohort	8						40	46	47	47			7	7
	Cohort	9				37	38	42	47	60				23	18
Representative Cohort →	Cohort	10				36	38	40	40	39	38	37	34	-2	-6
	Average		**22**	**32**	**35**	**36**	**38**	**40**	**40**	**39**	**38**	**37**	**34**	**-2**	**-6**
	Avg. of 1–9		**22**	**32**	**35**	**36**	**38**	**40**	**40**	**39**	**38**	**37**	**34**	**-2**	**-6**
ESL Pullout taught traditionally															
	Cohort	1				39	40	41	42					3	1
	Cohort	2				30	42	44	45					15	1
	Cohort	3				40	40	42	49	75				35	33
	Cohort	4							45	48	50	54		9	9
	Cohort	5					32	32	42	55	59			27	27
	Cohort	6								18	25	26	29	11	11
	Cohort	7							8	14	17	19	22	14	14
	Cohort	8								10	17	19	22	12	12
Representative Cohort →	Cohort	9				36	39	40	39	37	34	30	24	-12	-16
	Average		**22**	**32**	**35**	**36**	**39**	**40**	**39**	**37**	**34**	**30**	**24**	**-12**	**-16**
	Avg. of 1–8		**22**	**32**	**35**	**36**	**39**	**40**	**39**	**37**	**34**	**29**	**24**	**-12**	**-16**

eleventh grade the students in the two-way bilingual education program have on average a remarkable 19 point gain—approximately the same gain shown in Thomas and Collier's chart, Figure 1 of this article. What is interesting about this is that, although the average for each grade shows a gain over time, every single student in the bilingual program had a decline in achievement from the time they were first tested to the time they were last tested (except cohort thirteen which was inserted to maintain the rule that at least one cohort must demonstrate the underlying or average trend).

In fact, the so-called "representative" cohort has no impact on the average. If I remove cohort thirteen, the average for the program at each grade is exactly the same. This is shown in the table in the row "average of 1–12." I put this row in to demonstrate that Thomas and Collier's concern for identifying a cohort that was representative of the trend for the program means nothing because the representative cohort has no effect on the average. There is no one who would declare a program a success that had all (or 92 percent) of its students with achievement declines. Yet, the averages for the program "demonstrate" it is a success, with or without the one cohort that shows the same trend as the average.

There is a final line for the bilingual education programs consisting of hypothetical scores of students not tested, which is not calculated as part of the average for the program. I have inserted the probable scores of non-test-takers to give the reader an idea of what these averages might look like if the low-scoring untested bilingual education students were included in the computation. This row is not inserted for the ESL programs because almost all of these students are tested.

The next program in Table 5 is developmental bilingual education. There are eight cohorts with an average gain from fourth to eleventh grade of eleven points. Not quite the "gain" of the two-way bilingual programs, but still impressive. Moreover, by the seventh grade the students are supposedly scoring above the national norm. Yet, as with the two-way bilingual education program, every cohort but one (the one inserted because it is identical to the underlying trend) shows a large decline in achievement over the course of the program.

The next program in Table 5 is "TBE + Content ESL"—transitional bilingual education with the English language taught through subject matter taught in English (contrary to bilingual education theory). Again the individual cohort data is the reverse of the average for the whole program at each grade. Two cohorts showed no change from the first to the last test, seven cohorts showed a decline, and only one cohort showed a gain. Despite the fact that 90 percent

of the cohorts showed no change or a decline, the average across all cohorts is a small gain.

"TBE + ESL Traditional" is the next program in Table 5. Knowing how hard it is to determine what a program actually is without going into the classroom, I cannot imagine how Thomas and Collier were able to divide TBE programs into two types—those that had ESL pullout and those that had "content ESL." As is typical of this report, they do not tell us.

Although only one of the cohorts in this program had a decline in achievement and 92 percent showed no change, the average for the program is a decline. Again, the average is representative only of the one cohort that demonstrated the underlying trend and, of course, the averages are the same with or without the representative cohort.

The last column in Table 5 shows the decline from sixth grade on for these cohorts and for the whole program. Again, although none of the individual cohorts showed a decline, across all cohorts there was a three-point decline from the sixth grade.

The next program in Table 5 is ESL through academic content. Every cohort in this program, except the representative cohort, showed a gain from the first test to the last test. Yet, the program shows a small decline from fourth to eleventh grade. Similarly, every cohort showed a gain, some of them quite large, from sixth grade to the last test, but across all cohorts there was a decline of six points from the sixth grade.

The final program in Table 5 is ESL pullout taught traditionally. Every cohort, except the representative cohort, showed a gain, some of them quite large from fourth grade on. Yet, the program as a whole is considered a failure—because it has a twelve point decline. From sixth grade on every cohort showed a gain, some of them quite large; however, the program as a whole had a sixteen point decline!

In short, Table 5 demonstrates how overall averages for each grade can be produced by shorter individual cohorts with exactly the opposite trends. It is for this reason that a simple descriptive cohort analysis is not a valid means of evaluating programs and will continue to be rejected by scientists.

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The Labor Market Effects of Bilingual Education Among Hispanic Workers

Mark Hugo Lopez and Marie T. Mora

Abstract

During the past few decades there has been a rapid increase in the number of limited-English-proficient individuals in the U.S. If language deficiencies inhibit educational progress and labor market outcomes, schooling programs like bilingual education have long term economic implications. We first discuss some elements of the debate over bilingual education programs. Then, utilizing data from *High School and Beyond*, we find that first generation and (to a lesser extant) second generation Hispanics who attended a bilingual education program appear to earn significantly less than otherwise similar English-immersed peers who received monolingual English instruction, *ceteris paribus*.

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Introduction

Recent growth of the language minority population has shifted the linguistic distribution in the United States. For example, the U.S. decennial censuses report that the population share of residents aged five years and older who speak a non-English language at home rose from 11 to 13.8 percent (from approximately 23 million to 31.5 million individuals) between 1980 and 1990. Moreover, the portion of language minorities who report speaking English either "not well" or "not at all" increased from 18.3 to 21 percent during this time (U.S. Bureau of the Census 1984, 1993). The inflow of immigrants from non-English-speaking countries as well as the relatively high fertility rates of U.S.-born language minorities account for most of this shift.

While social scientists have consistently shown that English proficiency enhances schooling attainment, earnings, and occupational sorting in the U.S., less empirical attention has focused on the educational vehicles by which limited-English-proficient (LEP) students acquire English skills. Changing linguistic demographics indicate that U.S. schools face the task of instructing larger numbers of children with poor English fluency. Indeed, recent estimates suggest that LEP students represent at least five percent of all K–12 public school children (Han et al. 1997).

Schools have responded to growing numbers of LEP children by instituting a variety of bilingual education programs. Such programs, however, are costly. Recent data report that between $2 billion and $3 billion are spent per year on special educational services for LEP students at the state and local level in the U.S. (ALEC Foundation 1994). Additionally, despite the fact that the U.S. Department of Education receives federal on-budget funds for bilingual education programs, widespread disagreement exists over its relative effectiveness. Some analysts argue that bilingual education efficiently provides LEP children the opportunity to learn English and the course material simultaneously (e.g., Krashen 1996), while others argue that such programs delay English skill acquisition and the subsequent attainment of improved socioeconomic positions by these students (e.g., Porter 1996; Chavez 1991).

In what follows, we first discuss some of the key issues regarding the bilingual education debate. We then empirically analyze some of the labor market implications of bilingual education for Hispanic LEP students utilizing the 1980–1992 longitudinal surveys from the *Restricted-Use High School and Beyond* (HSB) data files. We focus on Hispanics because they comprise the vast majority of the language minority population in the U.S. and are expected to become this nation's largest racial/ethnic group in less than a decade.[1] Moreover, Hispanics represent the largest share (nearly three-fourths) of bilingual education participants in the U.S. (Fleischman & Hopstock 1993).

DEBATE OVER BILINGUAL EDUCATION AND ITS SOCIOECONOMIC IMPLICATIONS

Consider two mainstream methods to educate language minority students:

1. Monolingual instruction in English; and
2. A hybrid approach using both English and the minority language, i.e., bilingual education.[2]

States and school districts have traditionally designed and implemented bilingual education programs, at times with the help of the federal government. While most bilingual education programs are funded at the state and local level, federal funding has been made possible through the *Bilingual Education Act*—Title VII of the *1968 Elementary and Secondary Education Act* (U.S. Department of Education 1992).

As with most publicly funded programs, bilingual education is not without debate.[3] Individuals in favor of bilingual education assert that instruction in two languages allows for cognitive skill development in the minority language;

these skills eventually transfer to the English-speaking domain of the student. Moreover, this view contends that bilingual education serves as an integral ingredient for increasing LEP students' educational attainment and achievement. Finally, supporters contend that monolingual English instruction denies LEP students their opportunity for equal education given that class material is presented in an unfamiliar language. Legally, *Lau vs. Nichols* (1974) provides support for this view: the Supreme Court ruled that school districts failing to provide understandable instruction for LEP students obstruct these students' rights to equal educational opportunity (see Meier & Stewart 1991; Donato, Menchaca & Valencia 1991).

Proponents of monolingual English instruction argue that English immersion is the most efficient method to integrate LEP students into an English-oriented society.[4] One primary concern of bilingual education opponents includes the segregation of LEP students into separate classrooms or schools, which limits contact with English fluent students and decreases the likelihood of assimilation into predominately English-speaking environments. Public school segregation has been nationally outlawed since *Brown vs. Board of Education* (1954).

Finally, an alternative view of bilingual education posits that despite possible *theoretical* benefits, bilingual education programs are not effective in practice. An analogy can be made that in the pre-*Brown* era, segregated schools were theoretically "separate but equal"; in reality, they were not. While conceptually bilingual education programs involve teaching course material and English simultaneously, in practice this may not be the case. Much of this conviction arises because many teachers do not receive appropriate training for instructing LEP students (see Han et al. 1997), and may teach students to speak a language outside of the realm of the bilingual education course.[5] Moreover, the placement of recent immigrants into advanced bilingual education classes with students in the same age group may delay the English progress of these students because teachers must revert to a strong usage of the minority language to accommodate the new students (Glenn 1997).

This long-standing debate over bilingual education has recently intensified. For example, in early June 1998 voters in California decided to end bilingual education by passing Proposition 227—"English for the Children." This proposition eliminates most bilingual education programs in the state, and proposes placing LEP students in intensive sheltered-English-immersion classes that would generally last one year. The current population growth of language minorities warrants the belief that outcomes from such an initiative will have increasingly widespread educational and socioeconomic implications.

While the bilingual education debate is far from resolved, rigorous empirical methods can be utilized to investigate the effectiveness of bilingual education *vis-á-vis* English immersion programs. Many existing bilingual education studies do not rely on sound empirical methods to determine effectiveness,[6] and instead focus on teacher perceptions and simple unadjusted comparisons between bilingual education and non-bilingual education students in the short-run and as case studies. Very little research explores these programs at a national level, and even fewer studies discuss their long-term socioeconomic repercussions.[7] As Card and Krueger (1992) have suggested, "success in the labor market is at least as important a yardstick for measuring the performance of the educational system as standardized tests." Therefore, studies primarily focusing on short-run bilingual education outcomes may overlook the temporal and intergenerational implications that could arise several decades after the programs have been implemented.

For example, Hispanics, particularly recently-arrived immigrants, earn less on average than non-Hispanic whites in the United States. During the past few decades, social scientists have determined that a major source of this earnings gap stems from differences in human capital investment, particularly the relatively low education levels and limited-English proficiency of Hispanics.[8] The influence that bilingual education has on both educational attainment and English-skill acquisition could affect future labor market performance.

Clearly, higher schooling levels relate to subsequent economic success. Like education, acquiring English proficiency may be viewed as a human capital investment because communication skills increase production and consumption possibilities (e.g., McManus, Gould & Welch 1983); it follows that English fluency enhances potential output and earnings. Moreover, researchers have observed that English skills appear related to other socioeconomic aspects, such as occupational sorting (Mora & Dávila forthcoming; Powers & Seltzer 1998; Jasso & Rosenzweig 1989), schooling attainment (Espenshade & Fu 1997; Stevens 1992), and labor force participation (Schoeni 1998; Stier & Tienda 1992).

English proficiency acquisition also possesses intergenerational properties to the extent that parents transfer English skills to their children (see Stevens 1985). If bilingual education affects the English fluency or schooling attainment of an LEP child today, these skills (or lack thereof) may not only alter that child's future socioeconomic status, but also the potential status of future generations. In what follows, we do not test for the intergenerational effect of bilingual education; however, the reader should keep this issue in mind.

HIGH SCHOOL AND BEYOND DATA AND SAMPLE SELECTION

Given the well-documented labor market role of English proficiency, it seems reasonable to expect that native language instruction programs affect LEP students' future employment opportunities. If bilingual education programs are relatively more successful than English immersion, bilingual education participants should subsequently earn more on average than their otherwise similar counterparts. Using information from the *Restricted-Use High School and Beyond* (*HSB*) data set, we now compare the earnings between Hispanic workers who took bilingual education at some point during their primary and secondary school years and their corresponding peers who received monolingual English instruction.

The Data

In 1980, the National Center for Education Statistics (NCES) sponsored the *High School and Beyond* study to obtain a national longitudinal data set of sophomore and senior high school students; follow-up surveys have since been conducted in 1982, 1984, 1986, and 1992. One major strength of *HSB* includes its wealth of information on students' background and language use,[9] academic and high school characteristics, and work experience.

The advantage of using *HSB* over other national education data sets stems from the fact that labor market outcomes are observed one decade after high school completion.[10] One disadvantage with *HSB*, however, includes the selection group of the base-year survey: high school sophomores and seniors. Educational attainment and labor market results analyzed using *HSB* may be affected by a censoring-bias associated with the fact that many minorities, such as Hispanics, drop out prior to the tenth grade (Boozer 1992).

Defining the Sample of Analysis

Ideally, one could conduct a randomized experiment to evaluate schooling programs. However, given limited resources and the difficulties with implementing any randomized experiment at a national level, we are limited to employing available survey data. Our first task involves delineating a comparison group of students against whom we can compare statistically similar bilingual education program participants. Then, controlling for observed differences between both groups, we can infer the average effect of bilingual education programs on income.

To define the sample of students which comprises both the comparison and treatment groups, we attempt to follow guidelines used by many states to select which students qualify for bilingual education. While the determination of bilingual education enrollment varies between states and even within

school districts, in 1991–1992 forty-seven states (all except Alaska, Hawaii, and Nebraska) used a home language survey as part of their LEP identification process (U.S. Department of Education 1992; Henderson, Abbott & Strang 1994). The home language survey typically asks parents and/or students about the household language as well as the first language of the student. After completing this survey, language minority students are assessed on their native language and English proficiency through examinations and teacher evaluations. Recommendations for bilingual education generally depend on these assessments, with parents often (but not always) consulted on the enrollment decision.

While *HSB* does not contain data on students' English fluency at the time of initial enrollment in the U.S. school system, it provides information loosely equivalent to a home language survey. Specifically, students were asked a series of five questions related to language usage in the base year (1980) questionnaire:

1. What is the first language you spoke?
2. What other first language did you speak?
3. What language is spoken in your home today?
4. What other language is spoken in your home today?
5. What language do you speak most often today?

If a student reported a non-English language in at least one of these questions, we define the individual as being "at risk" for assignment to a bilingual education classroom.[11] Thus, we analyze the subset of individuals who could have been classified as LEP at some point during their schooling careers, and hence were potential candidates for participating in bilingual education. *HSB* further includes in the 1980 survey a series of questions answered by the "at risk" students related to language acquisition, proficiency, and prior bilingual education course work in grades one through six, seven through nine, and ten through twelve.

In this article, we focus on Hispanic workers reporting income in the 1992 restricted-use follow-up survey who were high school sophomores in 1980, and had participated in the *HSB* follow-up surveys. Of the 2,142 Hispanics in the 1992 survey with earnings, we exclude 844 from our analysis who are not "at risk" for receiving bilingual education. The non-"at risk" students most likely would not have qualified for a bilingual education program, and it would be inappropriate to directly compare them to bilingual education participants. In all, our sample includes 1,298 individuals, the majority of which were 28 years old when completing the 1992 follow-up survey.

Defining Bilingual Education Participation

We first broadly define program participation by using data on whether students who took English classes for non-English speakers had received instruction in other academic subjects (such as mathematics) in a non-English language in grades one through six, seven through nine, and ten through twelve.[12] Because this measure of bilingual education may not accurately distinguish between all types of programs (see Note 2), we additionally refine our measure to differentiate between English as a Second Language (ESL) participation and Transitional Bilingual Education (TBE) in which the student received academic instruction in his native language.

***High School and Beyond* Sample Summary Statistics**

Table 1 contains demographic information on the "at risk" Hispanic sample in *HSB*. We also include summary statistics for the bilingual education and non-bilingual education participant sub-samples.

Note that over 39 percent of the "at-risk" sample participated in bilingual education (mostly in TBE programs), with the vast majority of participants were first exposed to bilingual education in the first through sixth grades. Moreover, it is interesting to note that average earnings are slightly higher for the bilingual education participants than the non-bilingual education sample, $19,421 versus $19,179.[14] Also of interest, bilingual program participants tend to have more months of labor market experience and slightly less education than English-immersed students. These results suggest that bilingual education participants may leave school earlier and enter the work force sooner than non-bilingual education students.

When bilingual program participants are compared to the English instruction sample other characteristics of interest appear. Bilingual education recipients appear more likely to possess the following characteristics:

1. Be first generation immigrants;[15]
2. Reside in lower socioeconomic status (SES) households;
3. Score in the lower quartiles of the standardized exams administered by HSB; and
4. Have been held back a grade at some point during their schooling careers.

These summary statistics reaffirm other work on the national profiles of students in bilingual education reported elsewhere.[16]

Table 1
Demographics of "At Risk" Hispanic Workers in the Restricted-Use *High School and Beyond* Data Files

	All	Bilingual Ed Non-Participants	Bilingual Ed Participants
Bilingual education	0.396	—	1.00
ESL	0.121	—	0.306
Transitional Bilingual Ed	0.275	—	0.694
BE 1st exposure: Grade 1–6	0.304	—	0.768
BE 1st exposure: Grade 7–9	0.061	—	0.154
BE 1st exposure: Grade 10–12	0.029	—	0.073
Avg. 1990–91 earnings	$19,275	$19,179	$19,421
(standard deviation)	(13,395)	(14,253)	(11,985)
Months of job experience by 1991	62.033	60.522	64.335
	(16.850)	(18.212)	(14.244)
Years of education	12.877	13.045	12.621
	(1.674)	(1.076)	(1.493)
School dropout after 10th grade	0.141	0.127	0.163
Held back a grade	0.098	0.080	0.126
Immigrant Generation:			
First	0.134	0.095	0.193
Second	0.148	0.152	0.141
Second/third	0.128	0.144	0.103
Third	0.436	0.467	0.384
Lowest SES quartile in 1980	0.447	0.406	0.509
Second SES quartile in 1980	0.230	0.230	0.229
Third SES quartile in 1980	0.163	0.198	0.109
Highest SES quartile in 1980	0.118	0.133	0.095
Lowest 1980 exam quartile	0.319	0.223	0.466
Second 1980 exam quartile	0.233	0.259	0.193
Third 1980 exam quartile	0.184	0.241	0.097
Highest 1980 exam quartile	0.107	0.136	0.062
Number of observations:	1,298	827	471

Source: Authors= tabulations from the *Restricted-Use High School and Beyond (HSB)* base year (1980), first follow-up (1982), and fourth follow-up (1992) surveys. See text for sample restrictions and "at-risk" definition used in this study.[13]

EMPIRICAL FRAMEWORK AND RESULTS

To model the effect of bilingual education on earnings using *HSB*, we control for an extensive list of observed personal and school characteristics from the 1980 survey. Using these control variables, we estimate an ordinary least squares (OLS) model for the natural logarithm of average earnings from 1990 and 1991 (y_i) as:

$$y_i = X_i\beta_1 + HS_i\beta_2 + BE_i\gamma_o + \varepsilon_i$$

where X_i denotes personal characteristics including years of education completed, experience, and experience-squared from the 1992 survey;[17] and gender, immigration status (generation and immigrant's time in the U.S.), family income, family size, parental education, home ownership status, region, and urban status from the 1980 survey. To control for schooling quality differences that may affect earnings,[18] we include HS_i which represents a vector of high school attributes (such as the pupil-teacher ratio, starting teacher salary, per pupil expenditures, shares of the student body which are Latino, African American, and LEP, and public/private school status). Finally, *BE* is a binary variable which equals one for those who participated in bilingual education (and equals zero otherwise), with γ_o representing the average bilingual education treatment effect.

If the equation captures all of the characteristics correlated with bilingual education selection and earnings, γ_o will represent a consistent estimate of the effect of bilingual education on earnings, *ceteris paribus*. We realize, however, that there may be omitted from the equation some unobservable factors that determine bilingual education participation such that the estimated coefficient on γ_o may be biased; however, the direction of the bias is unclear. On the one hand, many times parents decide whether or not to place their children into a bilingual education program, and in some school districts, bilingual education participation begins through the parents' initiative (Crawford 1989). In this case, one might expect positive selection (and hence an overestimate of γ_o) because children in bilingual education have parents who are more involved in their education. On the other hand, recall from Table 1 that a higher share of the bilingual education students reside in low SES households, drop out of school, and fall into lower test quartiles than the English-immersed students. These findings may suggest negative selection into bilingual education, such that γ_o will be biased down. Our choice of the additional control variables should reduce the extent of the bilingual education selection bias, but we acknowledge there may be unobserved factors not statistically controlled for in the equation.[19]

Empirical Results

Table Two presents the regression-adjusted results from estimating the equation for different sub-samples of the "at risk" students. Concentrating on Column 1, bilingual education participants earned approximately $17,292 dollars a year on average in 1990 and 1991, compared to $17,040 for their equivalent non-bilingual education participants. While on the surface bilingual education participants appear to earn more, the difference is not statistically different from zero.

Table 2
Regression Adjusted Earnings Differences between Bilingual Education Participants and Non-Participants by Immigrant Status: Hispanic Workers in HSB

	Full Sample (1)	First Generation (2)	Second Generation (3)	Third or More Generation (4)
Bilingual Education	$17,292	$18,478	$18,886	$17,292
No Bilingual Education	$17,040	$24,200	$23,513	$17,516
Approximate Difference	1.0%	-31%*	-24.5%*	-1.3%
Number of Observations	1,298	216	253	645

*Statistically significant at the one percent and five percent level.

Source: *Restricted-Use High School and Beyond (HSB)* base year (1980), first follow-up (1982), and fourth follow-up (1992) surveys. See text for sample restrictions and "at-risk" definition used in this study. [20]

Closer scrutiny of the sample, however, indicates that Column 1 hides large differences in the measured effect of bilingual education programs for students born outside of the U.S. When dividing our Hispanic sample by generation of immigration, some very surprising and striking results appear (see Columns 2 through 4).[21] In Column 2, we find that first generation students who participated in bilingual education programs earn significantly less (approximately 31 percent less) than their otherwise similar English-immersed peers—$18,478 compared to $24,200. Focusing on second generation students, we observe a similar negative (but smaller in magnitude) difference between bilingual education and English program participants—$18,886 compared to $23,513. In sum, first and second generation students who participated in a non-English language assistance program at school earned significantly less ten years after high school than their English immersed counterparts. Among

third generation students in Column 4, we observe a statistically insignificant bilingual education effect similar to that reported in the first column.

While the results for immigrants in Table 2 seem surprising, we realize that the measure of bilingual education we employ is broad. To investigate potential differences between programs, we present empirical results comparing English as a Second Language (ESL) programs against transitional bilingual education (TBE) in Table Three.

Table 3
Regression Adjusted Earnings Differences between ESL, Transitional Bilingual Education (TBE) Participants and Non-Participants by Immigrant Status: Hispanic Workers in *HSB*

	Full Sample (1)	First Generation (2)	Second Generation (3)	Third or More Generation (4)
ESL	$17,212	$19,674	$21,712	$14,012
TBE	$17,041	$17,664	$18,227	$19,462
No Bilingual education	$17,040	$24,200	$23,513	$17,516
Approximate Difference				
ESL vs. No BE	1.0%	-23%	-8.3%	-25%
TBE vs. No BE	0.01%	-37%*	-29%*	10%
TBE vs. ESL	-1%	-11%	-19%	28%*
Number of Observations	1,298	216	253	645

* Statistically significant at the one percent and five percent level.

Source: *Restricted-Use High School and Beyond (HSB)* base year (1980), first follow-up (1982), and fourth follow-up (1992) surveys. See text for sample restrictions and "at-risk" definition used in this study. [22]

As in Table 2, we observe very small, and indistinguishable earnings differences between the ESL and TBE recipients for the entire "at risk" sample. When analyzing earnings for students in the same generation of immigration, we find that for first generation students, TBE students earned significantly less on average between 1990 and 1991 than their equivalent English-immersed peers. For example, Hispanic immigrants who were schooled bilingually earned approximately 37 percent less than their English-immersed peers. A similar story can be told for second generation students. We note that despite

the broadly defined bilingual education measure employed in Table 2, the results in Table 3 reaffirm that first and second generation participants in TBE programs earned less on average than their English-immersed counterparts. As in Table 2, Table 3 shows no statistically discernible differences among third generation Hispanics.

Table 4
Occupational Distribution of "At Risk" Hispanic Workers in the Restricted-Use *HSB* Data Files Across Bilingual Education Participants and Non-Participants

Occupation	Non-Participants	Bilingual Education Participants
Clerical	0.187	0.153
Craftsman	0.032	0.047
Farmer	0.000	0.001
Laborer	0.139	0.201
Management	0.161	0.136
Military	0.023	0.010
Skilled Operative	0.033	0.065
Professional	0.088	0.082
Owner of a Business	0.018	0.013
Protective Services	0.025	0.029
Sales	0.076	0.052
Teaching	0.018	0.010
Service	0.060	0.059
Technical	0.024	0.025
Number of Observations	827	471

Source: Authors' tabulations from the *Restricted-Use High School and Beyond (HSB)* fourth follow-up. See text for sample restrictions and "at-risk" definition used in this study.[23]

One potential explanation for the earnings differences between bilingual education and non-bilingual education participants may be reflected in their occupational distributions. To illustrate, Table 4 displays the unadjusted occupational distribution of bilingual education and English-immersed students in our "at risk" sample. Note that a higher share of Hispanics who received bilingual education are employed in "blue collar" occupations, while they are less likely to work in clerical, sales, and "white collar" professions than non-bilingual education students. Such a result intimates that students

who receive bilingual education may be sorted into lower paying jobs; future research should empirically investigate this facet. However, controlling for occupational status in Equation 1 does not eliminate the observed differences between bilingual education and ESL participants. These additional results are available from the authors.

Discussion of Potential Caveats

Conditional on a host of observed background characteristics, our empirical results suggest that first and second generation Hispanic students who went through some type of bilingual education (particularly TBE) appear to earn significantly less than their English-immersed counterparts. Such findings are alarming because newly arrived immigrants represent the population most likely be placed into bilingual education programs.

While our findings are striking and seem robust, we must discuss several potential caveats. First, the results presented in Tables 2 and 3 may be biased because of an unobserved selection process we cannot replicate. However, we have addressed selection as best as possible by adjusting the earnings figures for differences in observed personal, family, and school characteristics. Also, Lopez (1998) has more thoroughly analyzed the selection issue and finds that bilingual education selection based on unobserved traits seems relatively weak.

Second, some analysts may argue that our measure of bilingual education is too broad. Fortunately the *HSB* data allows for identification of two programs, namely ESL and TBE. Recall that Table 3 supports our results obtained using the broad measure in Table 2. In particular, we find that TBE programs are associated with the largest earnings differences among first and second generation students.

Third, we realize that our "at-risk" sample may not accurately represent the set of potential bilingual education participants, since it may contain some students who would not have qualified for participation in a bilingual education program (see Note 11). Clearly, we would prefer to eliminate these students from our analyses, but unfortunately cannot systematically do so. Nevertheless, recall that Tables 2 and 3 present results for all "at-risk" Hispanics, as well as for the sample partitioned by immigrant generation. Recently arrived immigrants with a minority language background represent the most likely candidates for being "at-risk" for bilingual education participation. Our results obtained using the immigrant sample are therefore all the more tenable since this group would have the greatest likelihood of being "at-risk." Moreover, while the "at-risk" non-bilingual education students represent our comparison group against which to measure bilingual education programs,

we also compare ESL and TBE programs across bilingual education participants (see Table 3) in case the ESL student sample is contaminated with those who would not have qualified for bilingual education. We find that among program participants, ESL students seem to have higher adjusted earnings than first and second generation immigrants in TBE, but lower adjusted earnings among third generation students.[24] While these differences are not statistically significant, possibly because of the small ESL sample sizes, it appears on the surface that TBE students earn less than their ESL counterparts.

Fourth, another potential dilemma is that students in the *High School and Beyond* sample would have enrolled in bilingual education during the 1970s. While the structure of bilingual education programs may have changed over time, we doubt the existence of a substantial difference between programs today and those implemented in the 1970s. Current programs seem substantially oversubscribed compared to those in the past as schools struggle to provide adequate services for all LEP students in a period of rising immigration.

Despite these caveats, however, if future research refines our analyses and reaffirms our findings, the labor market implications of bilingual education programs are not positive. For example, given that Hispanics tend to earn relatively less than their non-Hispanic white peers, the results presented here indicate that bilingual education programs may compound the Hispanic earnings gap. Moreover, bilingual education may *indirectly* influence socioeconomic outcomes via its impact on human capital acquisition, occupational attainment, or through the assimilation of immigrants. In all, future analysts cannot afford to ignore the potential long-term consequences of bilingual education when designing educational policies for limited-English proficient children.

CONCLUSION

In this paper we have discussed some of the potential labor market outcomes associated with bilingual instruction for the largest group of program participants: Hispanics. Our findings suggest that when examining "at risk" Hispanic students, individuals who receive bilingual education at some point during their educational careers do not appear to earn significantly more or less than their otherwise similar peers who were English-immersed, *ceteris paribus*. However, further exploration of the impact of bilingual education programs on immigrants' labor market income suggests an entirely different picture. The more recent a student's generation of immigration, the worse off Hispanic bilingual education participants appear to be with respect to earnings. This is a disturbing finding in that immigrants from non-English-speaking countries *conceptually* have the most to gain from bilingual education programs.

The story regarding the long-run impact of bilingual education is far from over. We note that because of the strong link between earnings and human capital (such as education and English proficiency) as well as the intergenerational properties of language acquisition, bilingual education programs may indirectly impact future labor market outcomes. If our results can be convincingly replicated, schooling programs like bilingual education may widen the socioeconomic gap between LEP and English proficient populations over time.

One element that future research should explore is to test empirically whether bilingual education crowds students into lower status jobs, as Table 4 suggests. Moreover, because our sample only includes working individuals, future studies may wish to investigate the link between bilingual education and labor force participation; extant research has found a link between English skills and participating in the labor market (e.g., Schoeni 1998; Stier & Tienda 1992). Another aspect to be addressed is whether or not bilingual education creates an earnings gap as workers mature in the labor market. Recall that the average age of the 1992 *High School and Beyond* sample is twenty-eight years, which may be relatively young to fully witness the long-term labor market effects of bilingual education. Finally, it may be of interest to test whether non-Hispanic immigrants experience the same tendencies as Hispanics.[25]

Schooling programs designed for LEP students have become increasingly important, given the current demographic shift away from monolingual English populations in this country. Also, because Hispanics (particularly recent immigrants) have been well documented to earn less than non-Hispanic whites on the basis of relatively low human capital investments, insights into the determinants of educational attainment and English skill acquisition have greater implications for the U.S. as a whole as this group becomes the largest racial/ethnic minority population. Policy makers should be aware that schooling policies designed for limited-English proficient students enacted today will affect the economic opportunities of increasing segments of the population far into the twenty-first Century.

NOTES

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1. In 1996, Hispanics comprised 10.5 percent of the total population in the U.S.

By 2005, their population share is projected to be 12.6 percent, compared to the projected 12.4 percent share of non-Hispanic African Americans in this country (U.S. Bureau of the Census 1996).

2. Although we use *bilingual education* to refer to schooling programs that utilize both the minority and majority languages, the reader should be aware of the tremendous amount of heterogeneity among these programs (see U.S. Department of Education 1992). Most programs (80 percent) in this country are the "one-way" (transitional) program, in which students are taught the class material in both languages; the use of the minority language is discontinued once students learn the majority language. English as a Second Language (ESL) is a special form of the "one-way" program, in which students attend English-only classes for part of the day, and receive English instruction in the minority language during the rest of the day. A "two-way" (bilingual/bi-cultural) program integrates both language-minority and language-majority students in the same class; each group learns the other's language and cultural characteristics. The *technical* definition of bilingual education used by policy makers and educators for funding purposes excludes ESL programs.

3. For studies that contain some of the elements of the bilingual education debate, see for example, Baker and de Kanter (1981), Ovando (1989); Willig (1985); Crawford (1989); Meier and Stewart (1991); Chavez (1991); Donato, Menchaca and Valencia (1991); Rodgers (1995); Porter (1996); Krashen (1996); Glenn (1997); Lopez (1998); Greene (1998); and Mora (1998b).

4. Ibid.

5. For example, some Chinese-speaking students in San Francisco have been placed in Spanish-English bilingual classes (Headden 1995).

6. Willig (1985) and Greene (1998) represent exceptions as they utilize meta-analysis on a selected set of prior bilingual education studies to determine the relative effectiveness of such programs.

7. See Lopez (1996, 1998) and Mora (1996, 1998b) for studies that discuss the potential influence of bilingual education programs on subsequent labor market outcomes.

8. For a classic discussion on the labor market role of English skills, see McManus, Gould & Welch (1983). Examples of other work include Jasso and Rosenzweig (1989); Dávila, Bohara & Sáenz (1993); Chiswick & Miller (1995); Trejo (1997); Mora (1998a); and Mora & Dávila (forthcoming).

9. The language survey employed by *HSB* was initially developed by the Office of Bilingual Education and Minority Languages Affairs (OBEMLA) with assistance from the Office of Management and Budget (NCES 1982).

10. For example, the NCES has also conducted the National Education Longitudinal Study of 1988 (NELS: 88), in which the base-year survey includes eighth graders. Although longitudinal, the recency of NELS: 88 prevents us from

observing the labor market outcomes for many of the surveyed students because they have not yet entered the formal labor market.

11. We realize this sample may not truly represent all "at-risk" students. Consider a student residing in a household in which English is the primary language, but some Spanish is also spoken; our sample specification would define this student "at risk." Unfortunately, since school districts may have different methods beyond the home language survey to determine both LEP status and bilingual education selection, we cannot obtain the actual selection criteria and systematically remove these students, and hence are limited to our definition.

12. While *HSB* also provides data on minority language reading and writing abilities, we do not include this information because it is unclear if the respondent is referring to foreign language classes (So 1983).

13. These summary statistics are weighted using the fourth follow-up from *HSB*. Some categories do not sum to one because of missing observations or rounding error. Earnings are calculated as the average of an individual's real earnings in 1990 and 1991; see text for a discussion of the construction of this variable.

14. We estimate earnings as the average of an individual's earnings in 1990 and 1991. For individuals with information on one year, we use earnings reported in that single year as the individual's average earnings measure. We avoid including income reported for 1992 because the survey was conducted in the spring of that year, such that 1992 annual earnings would either be estimated or truncated depending on the respondent's interpretation of the question.

15. We define immigrant generation as first (in which both the student and parents were born abroad), second (only the parent[s] had been born abroad), and third (both the student and parents were born in the U.S., and includes students whose families have been in this country for generations). The "second/third" category in Table 1 denotes missing information regarding whether the student is second or third generation.

16. For example, see Lopez (1998); Mora (1998b); Han et al. (1997); Henderson, Abbott & Strang (1994); Board of Education of the City of New York (1994); and McArthur (1993).

17. Unfortunately, with *HSB* we are unable to observe the educational experience of students outside of the U.S. and, thus, cannot control for the years of education individuals may have received in other countries.

18. Welch (1966) represents one of the first studies to explore the relationship between schooling quality and earnings; other researchers such as Card and Krueger (1992) have recently analyzed this issue.

19. To further address the issue of selection when estimating the equation, we utilize an instrumental variables technique and a Heckman approach with

the level of state legislation and federal funding at the high school as instruments. However, we do not report these results here since they do not significantly alter the basic findings reported below, and also because the validity of the specific instruments is in question (Lopez 1998). Moreover, we attempt to estimate the effect of bilingual education by the timing of a student's first exposure (not shown), and do not find a statistical difference.

20. The above models are estimated using OLS with the log of average earnings in 1990 and 1991 as the dependent variable. The above figures (in dollars) are weighted using *HSB*'s fourth follow-up cross-sectional weight. The "Third or More" immigration generation column includes individuals classified as "second/third" in Table 1. See the text for a discussion of the construction of the bilingual education participation variable. Other controls include job market experience (in months) and experience-squared, personal variables (marital status, gender, years of education, region and urban status of high school, 1980 family income level as five binary variables, parental education level as ten binary variables, and home ownership in 1980, categorical variables for immigrant generation and years since arrival), 1980 high school general characteristics (racial composition of the high school, starting teacher's salary, per pupil district expenditures, the pupil/teacher ratio, and whether or not the school is private), and a set of academic characteristics representing the 1980 academic achievement quartile. The average age of sample members is twenty-eight. Individual immigrant generation groupings do not sum to the full sample number of observations since we are unable to identify immigrant status for all sample members.

21. Tables 2 and 3 suggest that first and second generation students earn more on average than third generation students, *ceteris paribus*. The occupational distribution of these students explains the difference; when controlling for vocation in the equation, regression adjusted differences between recent immigrants and U.S. natives vanish. Because occupational attainment is endogenous, however, we do not include it in our reported regression adjusted earnings figures. Future studies should explore the occupational-sorting mechanism of the first and second generation students who received some schooling in the U.S.

22. The above models are estimated using OLS with the log of average earnings in 1990 and 1991 as the dependent variable. The above figures (in dollars) are weighted using *HSB*'s fourth follow-up cross-sectional weight. The "Third or More" immigration generation column includes individuals classified as "second/third" in Table 1. See the text for a discussion of the construction of the bilingual education participation variable. Other controls include job market experience (in months) and experience-squared, personal variables (marital status, gender, years of education, region and urban status of high school, 1980 family income level as five binary variables, parental education level as ten binary variables, home ownership in 1980, categorical variables for immigrant generation, and years since arrival), 1980 high school general character-

istics (racial composition of the high school, starting teacher's salary, per pupil district expenditures, the pupil/teacher ratio, and whether or not the school is private), and a set of academic characteristics representing the 1980 academic achievement quartile. The average age of sample members is twenty-eight. Individual immigrant generation groupings do not sum to the full sample number of observations since we are unable to identify immigrant status for all sample members.

23. Categories do not sum to 1.00 because of rounding errors and missing data. All results are weighted using the fourth follow-up cross-sectional weight.

24. We find it surprising that third generation students are enrolled in ESL programs and TBE programs. While we can not explain why third generation students participated in particular programs, we suspect that third generation students in ESL classes were enrolled for reasons other than their limited English proficiency.

25. Preliminary analysis by Lopez (1998) on the non-Hispanic population of *HSB*'s language minority students suggests no statistically significant links between bilingual education participation and earnings.

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New Insights: A Review of Ruben Rumbaut's "Transformations: The Post Immigrant Generation in an Age of Diversity"

Paul Hollander

The study examined here, Ruben Rumbaut's "Transformations: The Post-Immigrant Generation in an Age of Diversity,"[1] is largely based on two massive survey research projects which together form the *Children of Immigrants Longitudinal Study*.[2] The first survey began in 1992 and was followed in 1995–96 by a second survey of the same children located in the same areas. The findings provide striking documentation of differences among various newly arrived ethnic groups with special reference to the academic performance of their children. The data makes clear that few generalizations can be made about recent immigrants which apply across the board while it provides many welcome factual answers regarding the attitudes, aspirations, beliefs, strengths and weaknesses of the new immigrants and, especially, the young among them. In the words of Rumbaut, the project focused "on changes observed over time in language, identity, ambition and achievement" (p. 5) among the immigrants and especially their children.

While there is a certain amount of public awareness of the differences among different groups of immigrants, this study offers impressive documentation of them. For instance, "among adults over 25, Mexican immigrants had the lowest educational levels of any major U.S. ethnic group, native or foreign born" (p.6) and it is not entirely clear why this should be the case. Many readers may be surprised to learn that Filipinos are the second largest immigrant group in the country after Mexicans, and even less familiar is the finding that Filipinos have the lowest poverty rates of all sizable ethnic groups (p. 6). That such is the case is not exceptional given the fact that "41 percent of Filipino mothers have college degrees, well above [U.S.] national norms" (p. 7). Many readers may also be surprised to learn that "the Indochinese have very low rates of labor force participation indicative of their eligibility and use of public assistance." At the same time "Cubans, Jamaicans, Filipinos, and the 'Other Asians' are most likely to have one or both parents working as professionals" (p. 7).

It is far better known that Asian Americans tend to have intact and cohesive families. As is confirmed by this study, 75 percent of Asian-origin children

live with both biological parents at home, followed by Latin American families where the proportion of such children is 60 percent. Fewer than 50 percent of the Haitians and West Indians lived in intact families (p. 8).

In light of the recent California referendum on bilingual education and the long standing acrimonious debates preceding it, the findings regarding language preference are particularly interesting. The surveys reported in Rumbaut's study indicate that "73 percent of the total sample preferred to speak English instead of their parents' native tongue, including 64 percent of the foreign born youth and 81 percent of the U.S. born" (p. 9). In the second, later study these figures increased to a total of 88 percent, including 83 percent of the foreign born and 93 percent of the U.S. born (p. 9). To what extent these preferences were also reflected in competence or fluency is not made quite clear: the reported positive linguistic self-evaluations (p. 9) might not have been necessarily realistic. But if they were, the controversies over bilingual education would lose much of their importance. In any event, Rumbaut firmly believes that there is a "pattern of rapid linguistic assimilation [that is] constant across nationalities and socioeconomic levels" (p. 10). Even more striking, he reports that business leaders in Florida of late complained "about the dearth of fluent Spanish bilinguals among the children of Latin immigrants" (p. 11). Of course, it is possible that while the native language competence has withered, proficiency in English remained limited, a possibility not explored in this paper.

Another interesting finding concerns identification by national origin. In 1992, 41 percent chose a hyphenated American identification; 27 percent identified by national origin; 11 percent opted for plain "American"; and 17 percent selected what the author Rumbaut calls pan-ethnic identities such as Hispanic, Chicano, Asian, or Black (p. 11). However, in 1995 the combined foreign identifications rose to a total of 48 percent, and plain American fell to 2 percent. This is interpreted as a backlash against perceived anti-immigrant sentiment in California at the time. In reviewing both the Florida and California survey results Rumbaut concludes that "change over time...has not been toward assimilative mainstream identities...but rather toward a more proudly militant or nationalistic reaffirmation of the immigrant identity...and toward pan-ethnic minority group identities..." (p. 13).

Over time there was an increase in reports of discrimination experienced as the respondents were asked, for example, to agree or disagree with the statement: "No matter how much education I get, people will still discriminate against me" (p. 14). One may, however, interpret increasing agreement with such and similar statements as a form or result of acculturation; the longer the

immigrants in question lived here the clearer it may have become to them that the claim of being victims of discrimination is supported by a guilt-ridden dominant culture that sees itself as racist. Belief in the multiplicity of victim groups is also encouraged by elite groups and institutions. Hence, it may be the right thing to say in a survey that one belongs to one of them. But in spite of all 60 percent and 72 percent of the youths in the two surveys agreed with the statement: "There is no better country to live in than the United States" (p. 15).

Expressions of ambition on the part of those surveyed are also noteworthy. Asked what their parents' expectations were for their educational futures, the students felt that their parents expected them to achieve at a higher level than that to which they themselves aspired: while 44 percent of the students expected to attain an advanced degree, 65 percent of their parents expected them to do so; and while 18 percent of the children expected to stop short of a college degree, only 7 percent of the parents held such a low expectation (p.16).

Another interesting, and perhaps unexpected, finding of the survey was that about 80 percent of the sample reported spending more than an hour each day on homework and over 40 percent spent over two hours daily, well above the national U.S. average of less than one hour per day (p. 17). Contrary to many dire speculations about the performance and academic fate of immi-

Table 1
Multi-year Dropout rates, Miami-Dade and San Diego School Districts, by Race-Ethnicity and Gender: All Students District-wide vs. Children of Immigrants (CILS) (Grades 9–12)

	Total	White	Black	Hispanic	Asian	Male	Female
Miami-Dade Schools							
All Students:	17.6	13.6	20.2	17.8	8.7	19.7	15.3
Children of Immigrants (CILS)	8.9	7.8	7.5	9.2	6.5	9.5	8.4
San Diego Schools							
All Students	16.2	10.5	17.8	26.5	9.9	17.1	15.4
Children of Immigrants (CILS)	5.7	*	*	8.7	4.5	5.9	5.6

grant children, their dropout rates are significantly below those of the non-immigrant children. Table 1 strikingly conveys these findings.

On the other hand, there are "very large differences in all educational outcomes by national origin" (p. 21). The Chinese rank the highest in terms of grade-point averages and have the lowest drop-out rates followed by those students from India, Japan, and Korea. Vietnamese and Filipinos come next, followed by Laotians and Cambodians, West Indians and Haitians, respectively. "Overall, the poorest performance was registered by Latin American youth," and, unexpectedly, the highest dropout rate is found among Cubans in Miami (p. 21). The author considers the latter an anomaly, Cubans being a highly assimilated group. Nevertheless, a diametrically opposed hypothesis can also be entertained, namely that precisely because of their high degree of assimilation they have come to share attitudes and a work ethic more widespread among the native born American students, one that is not conducive to stellar academic performance.

The importance of peer influence was another important finding: "The worst outcomes...were associated with having close friends who themselves dropped out of school or had no plans for college" (p. 24).

Not surprisingly, the study reaffirmed that children from intact families "with both natural parents present at home" do much better in school, have higher grades, lower dropout rates, and higher aspirations (p. 22), and youth with parents who have higher education and higher status occupations also perform much better than those without these assets.

Also, among the less surprising findings there is confirmation of the ill effects of television watching: "Students who spent a large number of hours in front of the television by age 14 were more prone to perform poorly in subsequent years" (p. 23).

There is at least one finding that casts doubt on the politically correct conventional wisdom which attributes great benefits to strongly felt (non-white) ethnic group identities:

> Pan-ethnic self-identities (e.g., Chicano, Latino) selected by age 14 in junior high were linked three years later with lower GPAs, somewhat higher dropout and inactive rates, and lower aspirations (but not with lower self-esteem or higher depression scores). No such effects were observed for any of the other types of ethnic identities.... That finding lends support to analyses that have pointed to the defensive development in the adolescent years of "oppositional" or "adversarial" identities which, while

> protective of self-esteem, disparage doing well in school as "acting white" and as a betrayal of ethnic loyalty. (p. 24)

The studies reported and analyzed by Rumbaut throw new light on the conflicting attitudes and conditions of immigrants and their children and on the substantial discrepancies between the academic performance and expectations of groups of different ethnic origins. Much remains to be learned about the roots of these differences. Certainly discrimination as such offers limited explanation of, say, why those of Mexican background (as a rule of lighter skin color) perform more poorly than West Indians or Haitians (as a rule, of darker skin color) when color is generally regarded as a major physical focus and stimulant of discrimination. But, if physical characteristics are an important determinant of discrimination, why are Asians (also visibly different) less discriminated against or, if they are not, how and why do they succeed in surmounting its debilitating effects? If immigrants as a whole, and especially those "of color" among them, constitute a disadvantaged minority (and as such are beneficiaries of protective legislation), why is their academic performance and motivation in many ways superior to those of the native born? In turn, this puzzle leads to important sociological questions:

- Why are the educational aspirations and motivation of native born American children relatively low?
- How do immigrant children (and native born alike) interact with an educational system characterized by shockingly low standards, especially at the secondary level? [3]

These observations further suggest that informative studies of immigrants such as were here discussed raise important questions whose answers will help us to understand not merely the condition of the newly arrived, but also direct attention to prevailing cultural trends in the U.S. and to the unresolved problems of major institutions of American society.

Rumbaut is especially interested in the long-term influence the children of immigrants[4] will exert on American society as they come of age. How will they handle the conflicting pressures between old-fashioned "Americanization" and the more recent exhortations to embrace "cultural diversity" that boils down to hanging onto their cultural roots in implicit opposition to the character of the new society they have joined?

This country differs from most, perhaps all others in recorded history because it came into existence as the result of the movement of large numbers of people to its territory; becoming an American was and still remains a matter of choice

for millions who continue to arrive year after year. Rumbaut reports that there are today 55 million people in the U.S. who are either immigrants or U.S. born children of immigrants. For the vast majority coming to what became the United States meant and continues to mean a new beginning, a break with the past or a drastic modification of it. As time went by and as the contours of the new society emerged and solidified, there was something to which the new arrivals could adjust, something to which they could assimilate. American society, although clearly showing its European roots, became a distinct entity.

During the past quarter century or so a new attitude emerged in this country among some of its elite groups toward the assimilation of immigrants, a belief that there is little need for such a process, that the new immigrants are better off if they retain as much as possible of their particular traditions, cultural beliefs, and even their language. For many among these elites the whole concept of being American has come to be seen as nebulous or worse.

The concept of "diversity" (or "multiculturalism"), which entails an admiration for and the alleged equivalence of the cultures and customs of the ethnic groups that make up this society (usually excluding white Americans of European origin), emerged in direct opposition to the notion that there is something distinctly American. By contrast, the older belief held that a unique American culture with a discernible and worthwhile identity had evolved. Based as it is upon some of the most noble Western ideals and aspirations, it was believed that assimilation into this identity was worthwhile.

It is one of the unrecognized paradoxes of recent American social history that increasing volumes of immigration during the past three decades (90 percent of the 27 million foreign born residents presently in this country came since 1960) coincided with a prolonged soul-searching and a (by now) institutionalized collective self-criticism in American society that began in the late 1960s.[5] While new immigrants of more diverse ethnic origins than ever before were eagerly entering this country (or awaiting entry), its social-institutional structure and traditional values were subjected to a withering domestic criticism, indeed a reflexive rejection on the part of various elite groups.[6] First and foremost among them have been academic intellectuals (or at any rate, substantial and vocal portions thereof) who specialized, as it were, in increasingly implausible elaborations of the allegedly unique evils of this society. Consequently, it has become conventional wisdom on college campuses that this is an exceptionally unjust, corrupt, and immoral society—or, more specifically, the most racist, sexist, elitist, patriarchal, and repressive society ever known in history. A vast number of academic programs, courses, and textbooks have come to be anchored in these beliefs and assumptions as have many laws and

regulations (state and federal) promulgated over the years. The rhetoric and some of the policies of many churches, foundations, publishing houses, television, and radio programs are colored by images of American inequities.

The multiplication of certified victim groups officially entitled to both preferential treatment and a special moral solicitousness are also closely connected to such critiques of American society since virtually all of these groups derive their grievances or disadvantages from social-cultural sources or are advised by their mentors to do so.[7]

Unlike in the past, new immigrants, if non-white or Hispanic, have been automatically and legally assigned the status and identity of *victim,* although due to their foreign origins they can hardly be regarded as victims of American society and its past or surviving misdeeds. At the same time, there is little evidence to suggest that the new immigrants generally think of themselves as victims, and much to suggest that their levels of motivation to succeed and to incorporate traditional American values into their lives exceeds those of the established, indigenous victim groups, such as blacks, Puerto Ricans, and Native Americans.

Over the years and decades, beginning with the protest movements of the 1960s, the critiques of American culture and society have increasingly broadened their scope until they finally have merged into an indictment of Western culture as a whole. Nonetheless, as the most egregious example of the alleged harm this culture has inflicted on the world, the United States has remained the prime target of such criticism.

The institutionalization of cultural diversity study programs in our colleges and universities is perhaps the most visible and widespread indicator of these attitudes and beliefs; whatever the actual "diversity" of these programs (and there has been little, as far as their central ideas and ideologies are concerned) they have in common a virulent rejection of the Western heritage of ideas, beliefs, and institutional arrangements. Anybody however remotely associated with American academic institutions knows that "Eurocentric" (essentially a substitute for "Western") has been a term of scorn and denigration for some time now on the campuses.

While the increasingly elaborate disparagement of American culture and society has flourished at home, immigrants unacquainted with these critiques, and presumably suffering from "false consciousness" (as the critics would have it), have persisted in their desire to come to these shores. In fact, whether legally or illegally, they continue to arrive in great numbers, seeking and usu-

ally finding a better life than that they left behind. Certainly in our time and perhaps throughout recorded history, no single country (its domestic denigration by intellectual elites notwithstanding) has attracted such numbers. It must be emphasized that these denigrations are not those of the majority of citizens, nor are they consistently reflected in the political realm except in the readiness to grant victim status to groups whose claims to victimhood is sometimes questionable.

While the domestic rejections of American society and the associated broader anti-Western sentiments have had no discernible effect on levels of immigration, they have had consequences for the outlook and assimilation of the newly arrived. To be sure, the critics of America cannot advise aspiring immigrants not to seek entry to this supposedly corrupt, unjust and exploitative society since the majority of them were and are escaping either dire poverty or political repression the likes of which they were not going to experience here, not even in the estimation of the most embittered social critics.

However, whether directly or indirectly, what the critics have been capable of conveying to the new immigrants is that they are well advised to preserve their ethnic, cultural and linguistic identity since assimilation to this society (a bad society) is basically undesirable. From the point of view of "the adversary culture"[8] new immigrants are welcome potential recruits to its ranks and are tacitly encouraged to refuse to assimilate, to preserve their ways and values in presumed opposition to the evils deeply rooted in American history, culture, and society.

Whereas in the past assimilation—that is to say, assimilation to Western values, beliefs, and institutional arrangements as modified by the American experiment and experience—was the taken-for-granted path for the new immigrants (alongside the preservation of some sentimental ties with the old country which played a small part in their emerging new identity) according to the new conventional wisdom, the pivotal source of identity of the new immigrants is their ethnicity and their language. Certainly the new emphasis on the desirability of ethnic (as well as gender and sexual) identification is not limited to immigrants; it also applies to the older residents and citizens of this country, a movement that began with the black separatism of the late 1960s. Under these circumstances bilingualism, too, became for the critics of America a tool with which to fight, or at least retard or limit, assimilation into a culture they disparaged.

Only in the light of an underlying animosity toward American society and Western values does the encouragement of ethnic, cultural, or gender separatism make sense. In effect, the various ethnic groups have been advised to

dissociate themselves from what used to be the dominant culture, its values and institutions; radical feminists have advised women to do likewise. "Celebrating diversity" has proven to be highly invidious, at first implying and now articulating the rejection of basic, conventional American beliefs or values of usually European origin.

While the domestic developments outlined above made no dent on the volume of immigration they increasingly have posed new questions as to what precisely the new arrivals should adjust or assimilate. By asking what it means to be an American they raise the key question as to what shared civic virtues and human qualities (if any) immigrants should aspire.

Rumbaut's study (among other sources of information) suggests that more than ever before it has become increasingly difficult to predict what impact immigration will have on cultural identity and coherence in this nation.

NOTES

1. Ruben G. Rumbaut, "Transformations: The post-immigrant generation in an age of diversity." A paper presented at the annual meeting of the Eastern Sociological Society, Philadelphia, March 21, 1998.
2. These projects "followed the progress of a sizable sample of teenage youths representing 77 nationalities in two key areas of immigrant settlement... Southern California and South Florida" (Rumbaut, p.4).
3. An astonishing recent illustration of these low standards was provided by the results of the new Massachusetts teacher certification tests which 56 percent of the new teacher candidates failed.
4. Forty percent of the immigrants who came since 1960 arrived as children under 18.
5. Paul Hollander examined these critiques in his *Anti-Americanism: Critiques at home and abroad*, New York: Oxford University Press, 1992; an updated edition was published by Transaction Books (New Brunswick, NJ) in 1995. For a study of some of the historical roots of the critiques of American society and culture see James W. Ceaser, *Reconstructing America: The symbol of America in modern thought*, New Haven: Yale University Press, 1997.
6. On such elite attitudes, see Robert Lerner, Althea K. Nagai, and Stanley Rothman, *American elites*, New Haven: Yale University Press, 1996.
7. On the victim phenomenon, see for example Robert Hughes, *The culture of complaint*, New York: Oxford University Press, 1993; Charles Sykes, *Nation of victims*, New York, St. Martin's, 1992; Joel Best, Victimization and the victim industry, *Society*, 1997, May-June; David Rieff, Victims all? Recovery, co-de-

pendence and the art of blaming somebody else, *Harper's*, October 1991; Paul Hollander, We are all victims now, *Wall Street Journal*, January 18, 1995.

8. Paul Hollander, *The survival of the adversary culture*, New Brunswick: Transaction, 1988.

Four Year Longitudinal Report for The English Acquisition Program in the Bethlehem Area School District

Ann Goldberg

A trend towards redesigning bilingual programs appears to be growing across the country, especially in California. The Bethlehem Area School District made such a change in the Fall of 1993, after almost twenty years of Spanish bilingual instruction for limited-English students. The following program description and longitudinal report will be useful to educators who are contemplating a change to English language instruction.

Brief History

During the 1992–93 school year, the district's superintendent, Thomas J. Doluisio, concluded that all language minority students must gain English fluency as quickly as possible if they are to receive the highest quality education. After extensive discussion with staff, with community leaders both Latino and non-Latino, and with experts across the country, presentations were made to the Board of School Directors, and the Board voted to change the former bilingual program to an English language approach. The goal of the Bethlehem Area School District English Acquisition Program, as stated by the Board of School Directors at its meeting on February 1, 1993, is to have all limited-English proficient (LEP) students become fluent in English in the shortest amount of time possible so that they may achieve academic success in school.

I became coordinator that summer and worked to prepare for implementation in September 1993 with texts and instruction in English for all students. The majority of bilingual education teachers participated in the new program as teachers of English for Speakers of Other Languages (ESOL). Many of these teachers were worried about the change, but plunged in wholeheartedly in the interest of their students. Most of the ESOL teachers are bilingual in English and Spanish; they use their Spanish to talk to parents and to clarify concepts. (A sentence or two in Spanish helps to make a difficult concept clear and is invaluable when welcoming a frightened newcomer.) The language of instruction and all instructional materials are in English.

The question is often raised: "How long does it take before English language learners can successfully enter mainstream classes?" The answer to this question is that from the first day of attendance in the Bethlehem Area School District our elementary school second language learners are in regular homerooms and mainstream classrooms.

Each year a new group of approximately 150 students who do not speak English enter our kindergarten classes; about 95 percent of them are speakers of Spanish. By second grade, the great majority of these students have fluent basic conversational skills in English but continue to need support for literacy development and advanced concepts. We monitor not only their oral language proficiency, but literacy skills. Our students learn reading and writing in English; their reading helps expand their oral vocabulary and their growth in oral language promotes reading comprehension. Many other students who transfer from their original schools in Puerto Rico, South America, Florida, New York, and elsewhere enter our district at higher grade levels. Most of these students enter at the beginner level of English language proficiency because they are unable to carry on a basic conversation in English.

A student exits our program when he or she can participate successfully in a regular classroom without support from an English to Speakers of Other Languages (ESOL) program. Exit is determined by a team at each school, typically including the principal, the reading specialist, the ESOL teacher, and the classroom teacher. This team meets to discuss the evidence of achievement in all language skills (i.e., speaking, reading, and writing), informs the parent, and the student exits the program. Evidence of student readiness to exit the program includes a standardized assessment of reading comprehension, a writing sample, and oral language measures as described in our document Stages of Oral Language, Reading, and Writing (see *READ Perspectives* 2 (2), Fall 1995, Appendix A, 116–118).

INTERNAL PROGRAM EVALUATION

In response to a directive from the Bethlehem Area School District Superintendent of Schools, Thomas J. Doluisio, an Internal Evaluation Team met in 1996 to conduct an evaluation of our program. Surveys in Spanish and English were designed by the team and sent to all parents of students in the program. Parents replied anonymously and were given space to add their comments. Responses were mailed in pre-stamped envelopes to a neutral office, not to their child's school. We invited parents to tell us, honestly, how they felt about our program.

Eighty-one percent of parents of English Acquisition students stated that their

child has highly positive or positive feelings about school in the Bethlehem Area School District. Eighty-eight percent stated that their child's work was appropriate for his or her grade level. Although 31 percent of parents reported that they could not help their child with homework in English, 55 percent of parents reported that they spend more than a half hour a day helping their child with homework. Parents stated that their children have improved in the following areas: spoken language, written language, reading independently, and social interaction with peers. The most common remark written in the open ended section was in Spanish: *adelante*—meaning "go forward."

Separate surveys were designed for teachers and for students in the program. English Acquisition students and regular staff gave high ratings to the English Acquisition teachers who provide intensive support in oral language, literacy skills, and content area subjects.

Results of standardized test data showed that our elementary school students at the advanced level in English and our students who exited the program performed within the average band as measured by national norms.

We had concerns about a small group of high school students who did not have career goals and were not motivated by school. In response, we piloted a successful school-to-work program, bringing second language learners to a "shadowing" program at our local hospital two afternoons each week. Here the students rotate to forty-one areas of the hospital, work with fine role models, and become interested in post-high school opportunities in health careers. Their English and science curricula are related to the experiences they have in the hospital. These students have made outstanding gains in English proficiency, attitude, study habits, and motivation for school.

First year results of the special program for seriously at-risk high school students are as follows: sixteen limited-English students with low achievement were enrolled; three moved out of the district; and two did not complete the program. Four graduating seniors among the eleven in this school-to-work program were hired at the hospital and, in addition, are registered to continue their studies at the local community college. Both hospital staff and high school teachers are enthusiastic about this pilot program, which will be expanded and continued during 1998–99. Further details of this program are described in a Student Case History below.

LONGITUDINAL ANALYSIS

A recent analysis was conducted of students who entered our program while

it was being redesigned. During the 1993–94 school year, 349 students entered our program. Of this number, 232 were beginners in English proficiency. These students were unable to carry on a basic conversation in English and possessed very limited reading skills and no writing skills in English. Another sixty-four entered at the intermediate level. These students were able to carry on a basic conversation, but were unable to read or write in English well enough to study the content areas without support. Forty-three students entered at the advanced level. These students needed either the minimal support of the classroom teacher only or limited ESOL support to succeed in a mainstream classroom. Such a large group of entering beginner-level students poses a real challenge for teachers who must adapt the curriculum so that vital grade level academic concepts are learned.

Four years later, only 180 of these students are still enrolled in our district. The others have transferred to other school districts, often out-of-state, or returned to Puerto Rico. The mobility of our students limits our ability to ensure their rapid progress. It also frustrates teachers who often find that their classes in June contain only ten of the twenty or so students who had been there in September. Nevertheless, no matter how short the time available, Bethlehem's teachers are determined to make a perceptible improvement in their students' educational development.

Brief Description of Program Levels

Beginner-level students understand little or no English; over time they understand simplified speech with repetitions and rephrasing. Beginners may not read at all in English or may read some words and simple sentences but with little comprehension. Beginners may not write in English at all, but in time will write in phrases and simple patterned sentences.

Intermediate level students understand spoken English but require repetition and rephrasing. Their own speech may be hesitant, but consistent enough to carry on a basic conversation. They have difficulty with verb tenses and subject-verb agreement. They may also find the use of correct word endings to be difficult. In reading, intermediate students can retell the meaning of a simple passage. These students can write a concrete description of a picture/idea and have some knowledge of rules of punctuation.

Advanced level students understand most adult speech, with the exception of some complex grammatical structures. Though committing occasional errors in syntax, they can respond in detail. Their reading level is adequate to understand main ideas appropriate to grade level, but they may need ESOL support to understand advanced concepts in the textbooks. Although there are still

errors in their writing, advanced level students write good summaries, use compound and complex sentences, and demonstrate general control of subject/verb agreement and verb tense.

Competent students who exit the program are able to express themselves adequately to succeed in a regular education program without ESOL support, including reading texts and writing assignments appropriate to the mainstream classroom.

Within the beginner, intermediate, and advanced levels respectively, stages of achievement for speaking, reading, and writing are described in a district document. By requiring teachers to assess stages of student achievement in all these skills each November and June, staff can assess students' progress over time through reference to a district data base. Examples of this are given in the Student Case Histories below.

LONGITUDINAL DATA

Summary of the Longitudinal Data for Students who Remained for a Consistent Four Years

We studied the progress of the 180 students still present in the Bethlehem Area School District after four complete years of our program. Of this group who entered during the 1993-94 school year, one hundred students exited, thirty are at the advanced level, twenty-eight are at the intermediate level, and eight students are still at the beginner level. The remaining thirteen students are in special education. We've learned that most students who come to us unable to speak, read, or write English remain at the beginner level for about two years, the intermediate level for about a year or a year and a half, and the advanced level about another year before they exit. Students who know some English exit more rapidly, often within three years. Including both the exited and advanced level students as a group (and excluding the identified Special Education students), 83 percent of the 167 English Acquisition students are able to benefit from regular classroom instruction in English alongside native speakers and need either only minimal or no ESOL support at all after four years.

Summary of the Longitudinal Data for Students who Remained for Three Years

We studied the progress of the 198 students still present in the Bethlehem Area School District after three complete years in our program. Of this group of students who entered during the 1994–95 school year, sixty-four students exited, forty-eight students are at the advanced level, fifty-one students are at the intermediate level, and fourteen students are at the beginner level. The

remaining twenty-one students are in special education. Excluding the twenty-one Special Education students, the data on the remaining 177 students shows that thirty-six percent of the students exited within three years and twenty-seven percent are at the advanced level. A total of sixty-three percent of our students, both exited and at the advanced level, are able to fully benefit from regular classroom instruction with either only minimal or no ESOL support at all after three years.

Table 1
Longitudinal Data for Classes Entering in 1993–94 and 1994–95 Respectively

Level	Class entering 1994–95: 198 Students at end of three years	Class entering 1993–94: 180 Students at end of four years
Number of Students who have Exited	64 (32%)	100 (56%)
Number at Advanced Level	48 (24%)	30 (17%)
Number at Intermediate Level	51 (26%)	28 (16%)
Number at Beginner Level	14 (7%)	8 (4%)
Number in Special Education	21 (11%)	13 (7%)

Many more students than before have already been identified as in need of Special Education when they enter our district. This identification takes place in Puerto Rico, New York City, Florida, and the many other districts from which we receive transfer students. Upon review of each student's Individual Education Plan (IEP), our district places these students in an appropriate Special Education Program.

Intense ESOL instruction in the elementary school is provided for seventy-five minutes daily; the remaining five hours of the school day provide English immersion in regular classes. In the elementary schools, advanced level students are monitored but not taught by the ESOL teacher; help with advanced concepts is provided by the classroom teacher. Considering that most English Acquisition students enter as beginners, unable to speak, read, or write at all in English, this level of progress is very good. The re-designation rate for limited-English students to exit from bilingual programs in California, statewide, was 6.7 percent for 1997 (Debra Camillo, California State Department of Education). The goal of this program is success in the regular classroom; the majority of our students are achieving this goal after three or four years of support.

IMPLEMENTATION ISSUES

In the following pages, important implementation issues and our district responses to these issues are discussed. This discussion will be useful for districts that are planning a transition from bilingual education to structured English immersion.

Goal or Mission Statement

A new program requires a goal or mission statement endorsed by the administration and the Board of School Directors. The Bethlehem Area School District Board of School Directors in February 1993 stated that its goal is to have all limited-English proficient students become fluent in English in the shortest amount of time so that they may achieve maximum success in the Bethlehem schools. This publicly stated goal is an essential tool when groups, whether internal or external to the school district, argue for alternative purposes, such as the maintenance of the home language or proficiency in oral English only.

Placement Decisions for Students from the Former Bilingual Program to the New Program of Structured English Immersion

Bilingual and regular education teachers determined the placement of students from the former native language program into the new program's instructional levels. As a very general rule, students who were in Primary Language classes (taught in Spanish) were placed at the beginner level. Students who were in Sheltered English classes (where texts were in English but with Spanish language support) were placed at the Intermediate level. Students at the highest level, formerly called the ESOL level, were placed at the advanced level or evaluated for exit. Once the new program began in September 1993, the policy was for all newcomer students whose home language was a language other than English to register with the Center for Language Assessment where they were individually administered the LAS (McGraw-Hill) and a reading test to determine their language proficiency.

Criteria for determining student progress are developed and reviewed by professional staff. Decisions regarding a student's placement is at the school level, with monitoring and review by the Coordinator of the program.

Enrollment and Staffing Plan for Bethlehem Schools Since 1993

The original design team for the English Acquisition Program strongly endorsed the policy that all students, including second language learners, should attend their neighborhood schools. Parents and the children themselves prefer this option. This goal was balanced by the following factors:

- Space problems delayed the full implementation of the neighborhood school

plan for elementary level students. By the third year of the program all elementary school students were enrolled in their neighborhood or home schools. There are sixteen elementary schools in the district.

- Middle school beginner level students were not able to benefit from curriculum in regular classes at the sixth, seventh, or eighth grade level. These students needed sheltered instruction in English until they reach the intermediate level. One of the four middle schools was designated as the site for all beginner level students at the middle school level.
- High school classes designed to provide graduation credits could not be efficiently scheduled in both high schools; therefore, the solution was to require all high school English Acquisition students to attend one of the two large city high schools. The local community accepted this solution because of their familiarity with the high school ESOL program which had been in place and had been an English instructional program for many years.
- For efficient staffing, the district hired itinerant teachers in low impact schools with less than thirty-five English Acquisition students. In Bethlehem, ten out of sixteen schools were designated as low-impact. The ESOL teachers are all either full or half time and spend anywhere from two mornings a week to five mornings a week at a particular school. This flexible schedule depends on student numbers and proficiency levels within each school; as students entered or left a school, the teacher schedule was modified.

Middle School Modifications in 1997–98

After four years of following the original plan for beginner level students at the designated middle school, a problem became apparent. Beginner level students were reassigned to their neighborhood school once they reached the intermediate level of English proficiency. However, these students had become established with faculty and made friends in their school and were reluctant to move to a new school, even one closer to home. Once they moved to the home school, students found themselves trying to cope with both the more rigorous academic challenges and the lack of social support from friends. Some students exhibited behavior problems and a decline in academic skills, especially when this move occurred during the second semester. A modification to the original policy was made this year allowing beginners to move up to the next proficiency level while remaining at the same school until the end of the school year.

INSTRUCTIONAL ISSUES

In-service Training

Professional development for ESOL teachers and for regular classroom teachers is essential to the Bethlehem program's success. Classroom teachers, usu-

ally well meaning, need to know how best to assist the second language learner and to understand that the child's ability to understand a new language is usually better than his ability to express himself in that language. Many children go through a silent period. Even though they are making good progress in learning English, they do not speak it. Once the child is past this initial period, progress in speaking is very rapid, and the basic interpersonal skills are learned within a year or two. More difficult for our children is the academic language of textbooks and lectures. However, when the material is presented with visuals, with hands-on methods, with strategies to develop essential background information, with maps and study guides, our students can and do learn academic content well.

In the first year of our program when many classroom teachers were facing beginner level students for the first time, in-service workshops were offered by our in-house experts, selected bilingual teachers who were highly skilled in helping students learn English. These teachers presented a one-credit course, a fifteen hour after-school session three hours each week, that helped classroom teachers understand the difficulties in learning a new language as well as the most helpful instructional strategies.

Later, in-service workshops were offered by teacher-experts in literacy instruction, particularly teachers trained in the nationally validated Reading Recovery program. Key to our program success is the ability to teach English reading and writing skills to students who may or may not have acquired these skills in their home language. Children in first grade learn to read in English, regardless of their home language. This defies the "wisdom" of national experts but is based on our documented success. Knowing the specifics of promoting the early stages of literacy is vital for our elementary school teachers and for our English Acquisition teachers.

Teachers of English Acquisition (ESOL) must learn the assessment procedures and monitoring required for all students in the program. Teachers are required to administer the following measures to each student who is ready to move to another level: a reading of a passage, a story retelling exercise, and a writing sample. This evidence of student work is used to document student proficiency levels and is kept in individual student folders.

At the elementary school level, ESOL teachers do not teach a separate curriculum. Their curriculum is the same as that of the regular classroom; their task is to adapt, pre-teach, and re-teach concepts and vocabulary so the English Acquisition student can achieve success in the regular classroom. Collaboration between the regular classroom teacher and the ESOL teacher is

required for the success of this approach. The best teachers are familiar with the demands of the regular curriculum, creative at adapting lessons, and willing to act as advocates for second language learners within the school culture.

Dr. George Gonzalez has designed a very helpful program that advocates the use of quality literature to improve student learning. Dr. Gonzalez's program calls for immersing our second language learners in English language stories and using drama, manipulatives and recitation to build both language and literacy. A published author of Scott Foresman's *Celebrate Reading*, Dr. Gonzalez suggests the use of "ten important sentences" as a means to help students understand the story's main character, settings, problem, events, and resolution. Second language beginner level learners who could not read a difficult ten page story in the fourth grade anthology are able to grasp and retell the "ten important sentences" taken directly from the story. This approach enables our students to remain part of the regular classroom while learning basic literacy skills. Dr. Gonzalez returned to the district for four separate in-service days of training; he is uniformly applauded by teachers who find his ideas practical in their classrooms.

The secondary school English Acquisition teachers adopted texts suitable for their classes at the beginner, intermediate, and advanced level. A conscious effort was made to use texts either at the middle school or high school level but not the same texts at both. Students should not re-read in ninth or tenth grade the same text used in their earlier middle school classes.

For text selection, a few important factors are stressed:

- Each student needs a literature anthology as well as content area texts, i.e., history, science, etc. The *Voices in Literature* series from Heinle and Heinle is useful for middle school instruction. High school teachers like the *Scope* series from Scholastic. Materials based on copies and hand-outs supplement the textbooks.
- Abundant opportunities for wide reading are offered. Sets of novels were chosen by the middle school teachers to be housed in the central office. These books are shared each school quarter with middle school teachers who sign up for particular books. The subjects of these novels are of high interest, but they are written at an easier reading level. Some popular titles are Gary Soto's *Pacific Crossing* and *The Skirt*, Nicholosa Mohr's *Felita* and *Going Home*, S.E. Hinton's *The Outsiders* and, for beginners, Yashima's *Crow Boy*.

THREE REPRESENTATIVE CASE HISTORIES

To understand the program and the needs of our students, it is helpful to review three individual but representative cases. Although the names are changed, the vignettes are taken from actual case histories, and the scores given are exactly those in the students' records.

A Successful Elementary School Student

Leanna is a fairly typical student who entered our district in January 1993, six months before the transition from a bilingual program to a structured English immersion program took place. Leanna was tested for oral language proficiency in Spanish and English. Her Spanish was fluent, and she was a nonspeaker of English. Because at that time the bilingual program was still in place, Leanna was placed in a Spanish Primary Language class at an elementary school that housed all the Primary Language classes in kindergarten, first grade, and second grade. The language environment was completely Spanish in her kindergarten class.

When the program changed, an abrupt shift was required by district policy. Leanna returned to her home neighborhood school where she entered a regular first grade, although half the class was made up of Spanish-speaking second language learners. Teachers in this school expressed fear and anger during the first few months, as they realized that students from the bilingual program did not know basic directions in English or even how to ask questions about lunch or the bathroom. Leanna received 75 minutes daily of instruction from the English Acquisition teacher, who herself was bilingual in English and Spanish. By the spring of that year, Leanna's teacher was eager to report to a visitor that she could not " believe the progress the children have made in learning English." Leanna continued to receive help as a beginner through first and second grade, although her ESOL teacher reported that she progressed from a 1-1-1 (lowest stage in oral language, reading, and writing) to a 2-4-1 (higher levels of oral language and reading). The reading level showed particularly strong improvement; Leanna was learning to read in English.

By the end of second grade, Leanna was rated a 4-4-3 by her teacher who recommended that she move up to the intermediate level. At the intermediate level, she received forty-five minute English lessons three times a week, concentrating on developing her writing skills and her knowledge in content area subjects. She read with ninety-five percent oral reading accuracy a story from the anthology at her grade level and retold the story with one hundred percent accuracy.

At the end of fourth grade, the ESOL teacher rated her a 5-6-4 and moved her up to the advanced level. When she began fifth grade Leanna moved to another school because of her change in residence to another part of the city. As a fifth grade advanced level student in her new school, Leanna was monitored but received no direct help from the ESOL teacher. She was rated a 6-8-4 in June. At this point, evidence was gathered to document that she could exit the program. Leanna read a long passage from the Houghton Mifflin Reading Program fifth grade anthology. Her teacher wrote that though Leanna needed some prompting for details she had a good understanding of story elements and was able to accurately retell the story in its proper sequence. She made few oral reading errors, mispronouncing words such as "crone" and "through." Her writing sample was two and one half pages long with good ideas and no more errors than would be expected of a typical fifth grade native speaker of English. Leanna exited the program after four years of direct support and one year of monitoring. She will attend middle school as a successful regular education student with no ESOL support.

An Elementary School Student with Literacy Problems

Maria was labeled as the lowest performing kindergarten student in her class which was located at an elementary school set in a Bethlehem housing project. Ninety-eight percent of the students in this school are on free or reduced lunch; at least half come to school speaking Spanish as their first language. The teachers and principal in this school are energetic, competent, caring, and are well known for their skill and dedication.

Maria was tested for language proficiency when she transferred into our district. She had attended only a month of kindergarten in May after arriving from Honduras, and school officials wanted to place her back in kindergarten. However, our district policy is placement at age appropriate grades. Maria was six years old and eligible for grade one. Consequently, Maria was placed in the first grade and labeled as the "most at-risk student" in her class. As a beginner in the English Acquisition program, Maria received seventy-five minutes daily of special instruction from the ESOL teacher. This support, designed to pre-teach and re-teach the content of the regular classroom, helps students make comprehensible what they learn. The ESOL teacher may read and reread the story from the literature anthology, use photos, drawings, picture books, and computer resources to illustrate concepts and to teach important vocabulary. The weekly spelling list may be adapted and taught with hands-on methods, such as music and chants and the use of word and letter cards to help students sort out words. In addition, students are provided many opportunities to write in a daily journal. In spite of help from the ESOL teacher and a very caring Latina classroom teacher, Maria struggled to learn. She was

timid and withdrawn, spoke little in class, and did not seem able to pick up the English language arts and reading her classmates were learning quickly.

Maria was enrolled in the Reading Recovery program, an internationally recognized program to bring first grade students in the lowest twenty percent of their first grade classrooms up to the average level of their classmates. Reading Recovery teachers receive intensive, year long training and must take six graduate level credits in addition to teaching severely at-risk first graders for thirty minute daily sessions under the supervision of a Reading Recovery Teacher Leader. Reading Recovery guidelines direct schools to work first with the most needy children in first grade and not to exclude any child.

Maria received thirty minutes daily of Reading Recovery lessons in addition to the regular classroom reading program. At the beginning of her Reading Recovery Program, Maria could not recognize many letters and could not read any words or write any words except her name and "mom." Maria cooperated with the Reading Recovery teacher; parent contact revealed the mother to be very bright and interested, and willing to support the program by hearing her daughter read aloud the little books she brought home each night. The mother spoke only Spanish at this point; Maria was able to follow directions in English, but found it difficult to come up with the English word she needed to communicate.

The daily reading and writing sessions required in Reading Recovery were a wonderful vehicle to develop not only her reading and writing but also her oral language receptive and expressive skills. At the end of seventy-one thirty minute lessons, Maria read at the "end of first grade" reading level. The progress over these seventy-one lessons was uneven, particularly in the first forty lessons. Maria ran her words together during the writing part of the lesson; she confused *m* and *n*, although multiple chances to learn these were offered. Too often Maria turned to the teacher during the lesson for help with a difficult word. The program's goal is to help students use their own strategies when they meet with difficulty. However, in Reading Recovery the pressure is on the teacher to help the child become independent, to find just the right book, and make the right teaching point to accelerate the child's learning.

Maria learned to dictate simple sentences that were cut apart and practiced at home; she eagerly took home four to six little books to practice each night. By lesson fifty-eight, Maria read a level twelve text with ninety-nine percent accuracy, and could reread and self-correct her own errors. By lesson sixty-two, Maria would not skip an unknown word or guess wildly; she worked silently, asking for help only when her own strategies failed. By lesson seventy-two,

Maria could read *There's a Nightmare in My Closet*, a popular children's book by Mercer Mayer. Her classroom teacher reported an enormous gain in her self-esteem and her willingness to raise her hand and participate in class. Even her math skills improved as she invested more energy in her school work. Although she had been considered for retention, Maria was promoted to second grade. By March of grade two, Maria was moved up to the intermediate level in language proficiency. During grade three, she was cited as an able reader and moved in May to the advanced level. During fourth grade, Maria will receive only classroom instruction; no ESOL support will be given although the teacher will monitor her progress. By the end of fourth grade, Maria will probably exit the program, reading and performing on grade level. Without the special support of Reading Recovery, Maria was in danger of retention and probable placement in Special Education.

A High School Student with Multiple Problems

Roberto registered in the district at the beginning of the 1995–96 school year. He had attended school in Puerto Rico from kindergarten through seventh grade, attended eighth grade in a neighboring city in Pennsylvania, and returned to Puerto Rico for ninth grade. His proficiency level in English at entry to tenth grade was intermediate but he was quite weak in reading and writing skill.

Roberto was placed in the non-academic track at the high school. His social skills were outstanding; he is outgoing with peers and teachers, and he became an officer of the Latino Leadership Club. However, his investment in school work was minimal; his homework was not completed, and his number of absences was high. Teachers worried that he would not stay in school long enough to graduate. Roberto's mother, a single parent with one other child, struggled financially to keep the family together. Roberto was placed in the district's pilot school-to-work program, the Liberty High School/St. Luke's Hospital Health Career Program. The goal of the program is to motivate these students to stay in school, improve their English and science skills, and show them real career opportunities in health fields. Roberto was required to apply for entry into this program. As a condition of acceptance he was required to sign a contract stating he understood the requirements for good attendance and for the maintenance of academic standards. He also agreed to accept the Code of Conduct rules at the high school and at the hospital. He was pretested in June 1997 on the Language Assessment Scales and received a score of seventy-five, which placed him at Level Three, Limited English Proficiency.

Throughout the 1997–1998 school year, Roberto was an active participant at the hospital program two afternoons a week. His English and science cur-

ricula helped prepare him and the other students for the training at the hospital. He worked with forty-one different mentors within the hospital and was required to keep a notebook with specific questions to answer for each rotation. Hospital staff came to the high school one afternoon each week to discuss issues with the students. He and the other fifteen students involved were impressed by the teamwork, the caring atmosphere, and high level of performance of the hospital staff.

By the spring of the year, Roberto was working five hours a week at the hospital after school, a job that brought much needed income to his struggling family. His supervisor stated that he could use a dozen more workers like Roberto because of his excellent attitude, good attendance record, and his motivation to learn. Roberto became motivated to learn in school as well and began to excel in his academic subjects. His teachers at the high school reported an amazing change in attitude that they attributed directly to the school-to-work program. At the end of the year, Roberto was re-tested with the Language Assessment Scale and scored a ninety at Level Four, within the fluent range of English proficiency. He was exited from the program in June, 1998. Roberto will continue to pursue academic biology and will take part in a cooperative program with the local health bureau during his senior year in high school

CONCLUSION

Districts must provide for English language learners a well-organized, high quality program to teach English and literacy skills. It is also vital to provide "safety net" programs for students who enter with family and/or learning problems.

Making a major change from a bilingual program to a program of structured English immersion requires determination, flexibility, planning, and a willingness to deal with details. Parents are very supportive of instruction in English and want desperately for their children to find success in an English-speaking job environment. Parents continue to speak Spanish at home and want someone in their child's school to be able to communicate with them. Teachers from the former bilingual program have been a valuable part of this program's success and in maintaining home-school communication. The district also uses Spanish facsimiles of report cards and sends newsletters and important notices home in English and Spanish.

The evidence shows that children can and do learn English and their school subjects taught in English in a structured English immersion program. Students in this district are able to be successful in the regular program after a

relatively brief period of special help. The daily hour or so of support services that the Bethlehem School District provides to second language learners for three or four years is vital to their academic success. These children are our future doctors, teachers, business managers, and artists. Their diverse backgrounds will lend strength to our society as they participate in the full range of opportunities in the English-speaking community.

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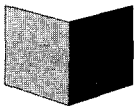

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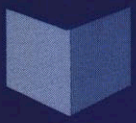

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